CITY OF MIDLAND, TEXAS
AGENDA FOR CITY COUNCIL MEETING
August 9, 2022 - 10:00 AM
300 North Loraine
Midland, Texas
Council Chamber - City Hall

A quorum of the City Council intends to be physically present at the aforementioned location.

The City Council may discuss, consider, and take action on any item listed on this agenda.

OPENING ITEMS

1. Invocation – Pastor Roy Smith, True-Lite Christian Fellowship Church

2. Pledge of Allegiance

CONSENT AGENDA

3. MOTION APPROVING THE FOLLOWING MINUTES:

   3a. REGULAR SESSION OF JULY 26, 2022

   3b. SPECIAL SESSION OF AUGUST 2, 2022

4. 2022-093 – RESOLUTION AWARDING A CONTRACT FOR THE SOLOMON LANE PAVING BOND PROJECT TO PERMIAN PAVING, INC. OF MIDLAND, TEXAS, AT A TOTAL COST OF $1,965,616.30; APPROPRIATING FUNDS; AND AUTHORIZING PAYMENT (DISTRICT 1) (GENERAL SERVICES)

5. 2022-094 – RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF A REPLACEMENT ENGINE FOR A CATERPILLAR 836H COMPACTOR FROM WARREN POWER & MACHINERY, INC., DBA WARREN CAT THROUGH BUYBOARD FOR A TOTAL COST OF $140,626.35 (DISTRICT: NONE) (GENERAL SERVICES)

6. 078-2022 – MOTION AUTHORIZING THE CITY MANAGER OR THE CITY MANAGER'S DESIGNEE TO ADVERTISE A REQUEST FOR SEALED BIDS FOR THE WATER SYSTEM IMPROVEMENTS AT BUSINESS 20 AND SAN ANDRES WATER MAIN EXTENSION PROJECT FOR THE UTILITIES DEPARTMENT AND TO NEGOTIATE A CONTRACT FOR SAID SERVICES; PROVIDED, HOWEVER, THAT SAID AGREEMENT SHALL NOT BECOME EFFECTIVE UNTIL APPROVED BY THE CITY COUNCIL (DISTRICT 2) (GENERAL SERVICES)

7. 2022-095 – RESOLUTION RATIFYING AND APPROVING THE PAYMENT FOR THE EMERGENCY MANHOLE REMOVAL AND REPLACEMENT IN JAL DRAW AT WHITNEY DRIVE BY TEC EXCAVATION, INC., FOR A TOTAL COST OF $103,805.00 (DISTRICT 3) (GENERAL SERVICES)

8. 2022-096 – RESOLUTION CALLING AN ELECTION FOR THREE CITY OFFICIALS; AMENDING THE BOUNDARY OF THE CITY ELECTION AND CITY COUNCIL DISTRICTS; PROVIDING FOR USE OF ACCESSIBLE VOTING SYSTEMS; ESTABLISHING ELECTION PRECINCTS FOR SAID ELECTION; AND ESTABLISHING VOTE CENTERS FOR SAID ELECTION (DISTRICT: ALL) (CITY SECRETARY)

9. 079-2022 – MOTION AUTHORIZING THE ACCEPTANCE OF GRANT FUNDS FROM THE TEXAS DEPARTMENT OF STATE HEALTH SERVICES IN THE FOLLOWING AMOUNTS AND FOR THE FOLLOWING PURPOSES: $150,358.00 TO ASSIST THE CITY OF MIDLAND HEALTH SERVICES DIVISION (THE "CITY") WITH THE DELIVERY OF IMMUNIZATION SERVICES; $105,462.00 TO ASSIST THE CITY WITH THE FUNDING AND DELIVERY OF PUBLIC HEALTH EMERGENCY PREPAREDNESS SERVICES; AUTHORIZING THE CITY MANAGER OR HIS DESIGNEE TO EXECUTE ALL NECESSARY ACCEPTANCE DOCUMENTS; AND AUTHORIZING AND DIRECTING THE CITY TREASURER TO DEPOSIT SAID GRANT FUNDS INTO THE GENERAL FUND (DISTRICT: ALL) (COMMUNITY SERVICES)

10. 2022-097 – RESOLUTION APPROVING THE ISSUANCE OF PERMITS TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") TO DRILL TWO OIL AND GAS WELLS LOCATED IN SECTION 2, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED BETWEEN 1,942 FEET AND 2,032 FEET WEST OF SOUTH LAMESA ROAD AND BETWEEN 165 FEET AND 167 FEET SOUTH OF INTERSTATE 20); AND WAIVING THE REQUIREMENT OF A ROAD REPAIR AGREEMENT (DISTRICT 2) (DEVELOPMENT SERVICES)

11. 2022-098 – RESOLUTION APPROVING THE FISCAL YEAR 2022-2023 BUDGET FOR THE MIDLAND-ODESSA URBAN TRANSIT DISTRICT (DISTRICT: ALL) (DEVELOPMENT SERVICES)

12. 2022-099 – RESOLUTION AUTHORIZING THE ISSUANCE OF AN OPERATING CERTIFICATE TO TARA ROSELIND MCCLAIN; SETTING FORTH CONDITIONS ACCOMPANYING THE CERTIFICATE; AND ESTABLISHING THE TERMS OF THE CERTIFICATE (DISTRICT: ALL) (POLICE)

SECOND READINGS

13. 10327 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE A 0.16-ACRE TRACT OF LAND OUT OF THE SOUTHEAST QUARTER OF BLOCK 21, HOMESTEAD ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE WEST SIDE OF NORTH MINEOLA STREET, APPROXIMATELY 92 FEET NORTH OF EAST MICHIGAN

AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 2) (DEVELOPMENT SERVICES) (FIRST READING HELD JULY 26, 2022)

14. 10328 – AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 3, BLOCK 13, GRAFALAND ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF STOREY AVENUE AND EAST BROADWAY STREET), BY PERMITTING (1) A REDUCED MINIMUM REAR YARD SETBACK AND (2) A REDUCED MINIMUM SIDE YARD SETBACK ON THE WEST SIDE OF THE LOT; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION (DISTRICT 3) (DEVELOPMENT SERVICES) (FIRST READING HELD JULY 26, 2022)

15. 10329 – AN ORDINANCE ADOPTING A FEE SCHEDULE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING AN APPEAL PROCESS; ESTABLISHING AN EFFECTIVE DATE OF OCTOBER 1, 2022; AND ORDERING PUBLICATION (DISTRICT: NONE) (FINANCE) (FIRST READING HELD JULY 26, 2022)

PUBLIC HEARINGS

The City Council will hold public hearings on the following items:

16. 10330 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 1, BLOCK 1, BUSH TENNIS CENTER ADDITION, AND LOT 4, BLOCK 1, CROSS POINTE ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR A RECREATION CENTER, IN PART, AND MF-16, MULTIPLE-FAMILY DWELLING DISTRICT, IN PART, TO LR, LOCAL RETAIL DISTRICT (GENERALLY LOCATED ON THE NORTH SIDE OF BRIARWOOD AVENUE, APPROXIMATELY 2,000 FEET WEST OF HOLIDAY HILL ROAD); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 4) (DEVELOPMENT SERVICES)

17. 080-2022 – THE PROPOSED GRANTING OF AN OIL AND GAS WELL PERMIT TO PIONEER NATURAL RESOURCES, USA, INC. (“OPERATOR”) FOR THE DRILLING OF THE OIL AND GAS WELL STIMSON E17A 101H; SAID WELL BEING GENERALLY LOCATED 405 FEET SOUTH OF ARAPAHOE ROAD AND 1,362 FEET WEST OF ELKINS ROAD; PUBLIC HEARING ONLY (DISTRICT 1) (DEVELOPMENT SERVICES)

18. 081-2022 – THE PROPOSED GRANTING OF OIL AND GAS WELL PERMITS TO PIONEER NATURAL RESOURCES, USA, INC. (“OPERATOR”) FOR THE DRILLING OF THE FOLLOWING OIL AND GAS WELLS: STIMSON-NAIL W17K 11H; STIMSON-NAIL W17L 12H; STIMSON-NAIL W17M 13H; STIMSON-NAIL W17N 14H; STIMSON-NAIL

W17O 15H; STIMSON-NAIL W17P 16H; STIMSON-NAIL W17Q 17H; STIMSON-NAIL W17R 18H; STIMSON-NAIL W17S 19H; AND STIMSON-NAIL W17T 20H; SAID WELLS BEING GENERALLY LOCATED 405 FEET SOUTH OF ARAPAHOE ROAD AND BETWEEN 1,040 AND 1,220 FEET EAST OF TODD DRIVE EXTENSION; PUBLIC HEARING ONLY (DISTRICT 1) (DEVELOPMENT SERVICES)

19. 082-2022 – THE PROPOSED GRANTING OF OIL AND GAS WELL PERMITS TO ENDEAVOR ENERGY RESOURCES, L.P. ("OPERATOR") FOR THE DRILLING OF THE FOLLOWING OIL AND GAS WELLS: ELKINS ATRELLE 31-42 #112; ELKINS ATRELLE 31-42 #113; ELKINS ATRELLE 31-42 #114; ELKINS ATRELLE 31-42 #123; ELKINS ATRELLE 31-42 #211; AND ELKINS ATRELLE 31-42 #221; SAID WELLS BEING GENERALLY LOCATED BETWEEN 500 FEET AND 501 FEET SOUTH OF EAST CYNTHIA DRIVE EXTENSION AND BETWEEN 1,096 FEET AND 1,221 FEET WEST OF TODD DRIVE; PUBLIC HEARING ONLY (DISTRICT 2) (DEVELOPMENT SERVICES)

20. 083-2022 – THE PROPOSED GRANTING OF OIL AND GAS WELL PERMITS TO ENDEAVOR ENERGY RESOURCES, L.P. ("OPERATOR") FOR THE DRILLING OF THE FOLLOWING OIL AND GAS WELLS: ELKINS ATRELLE 31-42 #122; ELKINS ATRELLE 31-42 #132; ELKINS ATRELLE 31-42 #133; ELKINS ATRELLE 31-42 #143; AND ELKINS ATRELLE 31-42 #231; SAID WELLS BEING GENERALLY LOCATED 359 FEET SOUTH OF EAST CYNTHIA DRIVE EXTENSION AND BETWEEN 1,803 FEET AND 1,903 FEET WEST OF TODD DRIVE; PUBLIC HEARING ONLY (DISTRICT 2) (DEVELOPMENT SERVICES)

21. 084-2022 – THE PROPOSED GRANTING OF OIL AND GAS WELL PERMITS TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") FOR THE DRILLING OF THE FOLLOWING OIL AND GAS WELLS: MUSTANG 120 MIPA UNIT #H120MS; MUSTANG 130 MIPA UNIT #H130SS; AND MUSTANG 140 MIPA UNIT #H140MS; SAID WELLS BEING GENERALLY LOCATED BETWEEN 1,575 FEET AND 1,697 FEET EAST OF RANKIN HIGHWAY AND BETWEEN 500 FEET AND 590 FEET SOUTH OF I-20; PUBLIC HEARING ONLY (DISTRICT 2) (DEVELOPMENT SERVICES)

22. 085-2022 – THE PROPOSED GRANTING OF OIL AND GAS WELL PERMITS TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") FOR THE DRILLING OF THE FOLLOWING OIL AND GAS WELLS: MUSTANG 150 MIPA UNIT #H150SS AND MUSTANG 160 MIPA UNIT #H160MS; SAID WELLS BEING GENERALLY LOCATED BETWEEN 952 FEET AND 1,121 FEET WEST OF RANKIN HIGHWAY AND BETWEEN 433 FEET AND 460 FEET SOUTH OF I-20; PUBLIC HEARING ONLY (DISTRICT 2) (DEVELOPMENT SERVICES)

23. 086-2022 – THE PROPOSED GRANTING OF AN OIL AND GAS WELL PERMIT TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") FOR THE DRILLING OF THE OIL AND GAS WELL REBEL #H120MS; SAID WELL BEING GENERALLY LOCATED 380 FEET EAST OF SOUTH LAMESA ROAD AND 463 FEET SOUTH OF I-20; PUBLIC HEARING ONLY (DISTRICT 2) (DEVELOPMENT SERVICES)

24. 087-2022 – THE PROPOSED GRANTING OF AN OIL AND GAS WELL PERMIT TO

PERMIAN DEEP ROCK OIL CO., LLC (“OPERATOR”) FOR THE DRILLING OF THE OIL AND GAS WELL REBEL #H130SS; SAID WELL BEING GENERALLY LOCATED 271 FEET WEST OF SOUTH LAMESA ROAD AND 205 FEET SOUTH OF I-20; PUBLIC HEARING ONLY (DISTRICT 2) (DEVELOPMENT SERVICES)

25. 088-2022 – THE PROPOSED GRANTING OF AN OIL AND GAS WELL PERMIT TO PERMIAN DEEP ROCK OIL CO., LLC (“OPERATOR”) FOR THE DRILLING OF THE OIL AND GAS WELL REBEL #H140MS; SAID WELL BEING GENERALLY LOCATED 1,142 FEET WEST OF SOUTH LAMESA ROAD AND 185 FEET SOUTH OF I-20; PUBLIC HEARING ONLY (DISTRICT 2) (DEVELOPMENT SERVICES)

26. 10331 – AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 22, BLOCK 131, WILSHIRE PARK ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE WEST SIDE OF MONTY DRIVE, APPROXIMATELY 134 FEET NORTH OF MERCEDES DRIVE), BY PERMITTING (1) AN INCREASED MAXIMUM NUMBER OF ACCESSORY BUILDINGS, (2) A REDUCED MINIMUM FRONT YARD SETBACK AND (3) A REDUCED MINIMUM SIDE YARD SETBACK ON THE NORTH SIDE OF THE LOT; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION (DISTRICT 4) (DEVELOPMENT SERVICES)

27. 10332 – AN ORDINANCE EXTENDING THE BOUNDARIES OF THE CITY OF MIDLAND, TEXAS, BY ADDING THERETO A CERTAIN AREA ADJOINING THE PRESENT CITY LIMITS, BEING A 2.27-ACRE TRACT OF LAND OUT OF SECTION 22, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF DUMFRIES ROAD, APPROXIMATELY 3,590 FEET NORTH OF HIGHWAY 158); ORDERING PUBLICATION; AND ORDERING RECORDATION BY THE CITY SECRETARY (DISTRICT 4) (DEVELOPMENT SERVICES)

28. 10333 – AN ORDINANCE ESTABLISHING THE INITIAL ZONING CLASSIFICATION OF THE AREA INDICATED AS BEING A 2.27-ACRE TRACT OF LAND OUT OF SECTION 22, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, AS AN AE, AGRICULTURAL ESTATE DISTRICT; SAID TRACT BEING GENERALLY LOCATED ON THE EAST SIDE OF DUMFRIES ROAD, APPROXIMATELY 3,590 FEET NORTH OF HIGHWAY 158; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 4) (DEVELOPMENT SERVICES)

MISCELLANEOUS

29. 10334 – AN ORDINANCE ESTABLISHING INTERSECTION STOPS AT VARIOUS LOCATIONS WITHIN THE CITY OF MIDLAND, TEXAS; AUTHORIZING AND DIRECTING THE TRAFFIC ENGINEER TO INSTALL APPROPRIATE SIGNS AND MARKINGS AT THE DESIGNATED LOCATIONS; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A

SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO HUNDRED DOLLARS ($200.00); AND ORDERING PUBLICATION (DISTRICT: ALL) (ENGINEERING SERVICES)

PUBLIC COMMENT

30. Receive public comments where individuals may address the City Council on City related issues and projects not on the present agenda. Any deliberation of or decision by the City Council regarding the item being discussed shall be limited to a motion to place the item on the agenda for a subsequent meeting. (Please limit comments to three minutes or less.)

EXECUTIVE SESSION

31. Pursuant to Texas Government Code § 551.101, the City Council will hold an Executive Session, which is closed to the public, to discuss the following matters as permitted under the following sections of the Texas Government Code:

    a. Section 551.071, Consultation with Attorney

    a.1. Discuss matters in which the duty of the attorney(s) to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with Chapter 551 of the Texas Government Code

Respectfully Submitted,

Robert Patrick
City Manager

MEETING ASSISTANCE INFORMATION: The Midland City Hall and Council Chamber are wheelchair accessible. If you need special assistance to participate in this meeting, please contact the City Secretary's Office at (432) 685-7430. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

MIDLAND CITY COUNCIL
MINUTES
July 26, 2022

The City Council convened in regular session in the Council Chamber, City Hall, Midland, Texas, at 10:00 a.m., July 26, 2022.

Council Members present:	Dan Corrales, Robin Poole, Lori Blong, Patrick Payton, Scott Dufford, Jack Ladd, John Norman
Council Members absent:	None
Staff members present:	City Attorney John Ohnemiller, Deputy City Manager Morris Williams Jr, Assistant City Manager Tina Jauz

The meeting was called to order at 10:00 a.m.

OPENING ITEMS

1. Invocation – Pastor Robb Foreman, Homeline Baptist Church

2. Pledge of Allegiance

CONSENT AGENDA

Dan Corrales moved to approve the Consent Agenda items 3-9; seconded by Jack Ladd.

The motion passed by the following vote:
AYE: Corrales, Poole, Blong, Payton, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

3. MOTION APPROVING THE FOLLOWING MINUTES:

   3a. REGULAR SESSION OF JULY 12, 2022

   3b. SPECIAL SESSION OF JULY 13, 2022

4. 2022-088 – RESOLUTION AUTHORIZING THE ADOPTION OF THE CITY OF MIDLAND'S 2022-2023 ACTION PLAN TO THE CONSOLIDATED PLAN FOR COMMUNITY

DRAFT

DEVELOPMENT AND HOUSING FUNDS FOR THE CITY'S FISCAL YEARS 2020-2024; THE CONSOLIDATED PLAN HAVING BEEN APPROVED BY RESOLUTION NUMBER 2020-127; AND AUTHORIZING THE EXECUTION OF AN APPLICATION FOR COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS (DISTRICT: ALL) (DEVELOPMENT SERVICES)

5. 2022-089 – RESOLUTION GRANTING VARIANCES FOR TWO OIL AND GAS WELLS TO BE LOCATED CLOSER THAN 500 FEET OF AN OCCUPIED RESIDENCE OR COMMERCIAL STRUCTURE; APPROVING THE ISSUANCE OF PERMITS TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") TO DRILL SAID OIL AND GAS WELLS LOCATED IN SECTION 10, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED BETWEEN 1,750 FEET AND 2,320 FEET WEST OF RANKIN HIGHWAY AND 520 FEET SOUTH OF INTERSTATE 20); AND WAIVING THE REQUIREMENT OF A ROAD REPAIR AGREEMENT (DISTRICT 2) (DEVELOPMENT SERVICES)

6. 2022-090 – RESOLUTION APPROVING THE ISSUANCE OF A PERMIT TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") TO DRILL AN OIL AND GAS WELL WITHIN THE CITY LIMITS LOCATED IN SECTION 2, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED 2,335 FEET EAST OF RANKIN HIGHWAY AND 170 FEET SOUTH OF INTERSTATE 20); AND WAIVING THE REQUIREMENT OF A ROAD REPAIR AGREEMENT (DISTRICT 2) (DEVELOPMENT SERVICES)

7. 2022-091 – RESOLUTION ACCEPTING A GRANT AWARD FROM THE TEXAS "J" REGIONAL ADVISORY COUNCIL IN THE AMOUNT OF $17,764.00; SAID FUNDS TO BE USED BY THE MIDLAND FIRE DEPARTMENT FOR TRAINING, EQUIPMENT, AND SUPPLIES (DISTRICT: NONE) (FIRE)

8. 076-2022 – MOTION AUTHORIZING THE EXECUTION OF TWO RIGHT-OF-WAY LICENSES WITH WHISTLER PIPELINE LLC., THE FIRST REGARDING CITY-OWNED PROPERTY DESCRIBED AS SECTIONS 4, 9 AND 16, BLOCK 37, TOWNSHIP 3 SOUTH, T&P RR CO. SURVEY, MIDLAND COUNTY, AND THE SECOND REGARDING CITY-OWNED PROPERTY DESCRIBED AS SECTION 9, BLOCK 37, T3S, T&P RR CO. SURVEY, MIDLAND COUNTY (DISTRICT: NONE) (UTILITIES)

9. 077-2022 – MOTION AUTHORIZING THE EXECUTION OF TWO RIGHT-OF-WAY LICENSES WITH BANGL, LLC., THE FIRST REGARDING CITY-OWNED PROPERTY DESCRIBED AS SECTIONS 4, 9 AND 16, BLOCK 37, T-3-S, T&P RR CO. SURVEY, MIDLAND COUNTY, AND THE SECOND REGARDING CITY-OWNED PROPERTY DESCRIBED AS SECTION 9, BLOCK 37, T-3-S, T&P RR CO. SURVEY, MIDLAND COUNTY (DISTRICT: NONE) (UTILITIES)

SECOND READINGS

10. 10323 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOTS 1, 2, 3, 10, 11, AND 12, BLOCK 13, AND LOTS 1 AND 2,

DRAFT

BLOCK 14, LANGFORD WEATHERRED ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM SF-1, SINGLE-FAMILY DWELLING DISTRICT, IN PART, AND SF-2, SINGLE-FAMILY DWELLING DISTRICT, IN PART, TO PD, PLANNED DEVELOPMENT DISTRICT FOR AN OFFICE CENTER (GENERALLY LOCATED ON THE EAST SIDE OF THE INTERSECTION OF NORTH A STREET AND ELK AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 2) (DEVELOPMENT SERVICES) (FIRST READING HELD JULY 12, 2022)

Deputy City Secretary Vanessa White read the caption of Ordinance No. 10323.

Dan Corrales moved to approve the second and final reading of Ordinance No. 10323; seconded by John Norman.

The motion passed by the following vote:
AYE: Corrales, Poole, Blong, Payton, Dufford, Norman
NAY: None
ABSTAIN: None
ABSENT: Ladd

11. 10324 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR A 4,472-SQUARE FOOT PORTION OF LOT 1, BLOCK 8, POLO PARK ADDITION, SECTION 3, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF NORTH GARFIELD STREET AND WEST LOOP 250 NORTH), WHICH IS PRESENTLY ZONED PD, PLANNED DEVELOPMENT DISTRICT FOR A SHOPPING CENTER, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A RESTAURANT FOR ON-PREMISES CONSUMPTION; MAKING SAID DESIGNATION SUBJECT TO CERTAIN CONDITIONS AND RESTRICTIONS CONTAINED HEREIN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 1) (DEVELOPMENT SERVICES) (FIRST READING HELD JULY 12, 2022)

Deputy City Secretary Vanessa White read the caption of Ordinance No. 10324.

Jack Ladd moved to approve the second and final reading of Ordinance No. 10324; seconded by Dan Corrales.

The motion passed by the following vote:
AYE: Corrales, Poole, Blong, Payton, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

12. 10325 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO GRANT A SPECIFIC USE DESIGNATION WITH TERM FOR LOTS 2 AND

DRAFT

3, BLOCK 27, ORIGINAL TOWN ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE WEST SIDE OF NORTH COLORADO STREET, APPROXIMATELY 66 FEET SOUTH OF OHIO AVENUE), WHICH IS PRESENTLY ZONED CB, CENTRAL BUSINESS DISTRICT, ALLOWING SAID PROPERTY TO BE USED FOR THE SALE OF ALL ALCOHOLIC BEVERAGES IN A LOUNGE FOR ON-PREMISES CONSUMPTION; MAKING SAID DESIGNATION SUBJECT TO CERTAIN CONDITIONS AND RESTRICTIONS CONTAINED HEREIN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 2) (DEVELOPMENT SERVICES) (FIRST READING HELD JULY 12, 2022)

Deputy City Secretary Vanessa White read the caption of Ordinance No. 10325.

Scott Dufford moved to approve the second and final reading of Ordinance No. 10325; seconded by Robin Poole.

The motion passed by the following vote:
AYE: Corrales, Poole, Blong, Payton, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

13. 10326 – AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 5, BLOCK 1, KALPOWAR ESTATES, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF TROBAUGH BOULEVARD, APPROXIMATELY 409 FEET NORTH OF GLASGOW DRIVE), BY PERMITTING AN INCREASED MAXIMUM NUMBER OF ACCESSORY BUILDINGS; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION (DISTRICT 4) (DEVELOPMENT SERVICES) (FIRST READING HELD JULY 12, 2022)

Deputy City Secretary Vanessa White read the caption of Ordinance No. 10326.

Lori Blong moved to approve the second and final reading of Ordinance No. 10326; seconded by Jack Ladd.

The motion passed by the following vote:
AYE: Corrales, Poole, Blong, Payton, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

PUBLIC HEARINGS

The City Council will hold public hearings on the following items:

14. 10327 – AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF

DRAFT

MIDLAND TO REZONE A 0.16-ACRE TRACT OF LAND OUT OF THE SOUTHEAST QUARTER OF BLOCK 21, HOMESTEAD ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE WEST SIDE OF NORTH MINEOLA STREET, APPROXIMATELY 92 FEET NORTH OF EAST MICHIGAN AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 2) (DEVELOPMENT SERVICES)

Deputy City Secretary Vanessa White read the caption of Ordinance No. 10327.

Development Services Director Chuck Harrington gave a brief overview of the item noting the applicant is proposing to redevelop the property as a single family home as some properties were inappropriately zoned.

Mayor Payton opened the public hearing at 10:08 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

John Norman moved to approve the first of two readings of Ordinance No. 10327; seconded by Lori Blong.

The motion passed by the following vote:
AYE: Corrales, Poole, Blong, Payton, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

15. 10328 – AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 3, BLOCK 13, GRAFALAND ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF STOREY AVENUE AND EAST BROADWAY STREET), BY PERMITTING (1) A REDUCED MINIMUM REAR YARD SETBACK AND (2) A REDUCED MINIMUM SIDE YARD SETBACK ON THE WEST SIDE OF THE LOT; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION (DISTRICT 3) (DEVELOPMENT SERVICES)

Deputy City Secretary Vanessa White read the caption of Ordinance No. 10328.

Mayor Payton opened the public hearing at 10:10 a.m. There being no one present wishing to speak, the public hearing was immediately closed.

Lori Blong moved to approve the first of two readings of Ordinance No. 10328; seconded by Jack Ladd.

The motion passed by the following vote:

DRAFT

AYE: Corrales, Poole, Blong, Payton, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

MISCELLANEOUS

16. 10329 – AN ORDINANCE ADOPTING A FEE SCHEDULE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING AN APPEAL PROCESS; ESTABLISHING AN EFFECTIVE DATE OF OCTOBER 1, 2022; AND ORDERING PUBLICATION (DISTRICT: NONE) (FINANCE)

Deputy City Secretary Vanessa White read the caption of Ordinance No. 10329.

Finance Director Christy Weakland gave a brief overview of the item noting that the Community Services Department and the Solid Waste Department are requesting fee increases that would take effect October 1, 2022.

Council Member Blong inquired about the appeal process for the fee schedule and City Attorney John Ohnemiller explained the appeal process along with the amendment process.

Lori Blong moved to approve the first of two readings of Ordinance No. 10329; seconded by Dan Corrales.

The motion passed by the following vote:
AYE: Corrales, Poole, Blong, Payton, Dufford, Ladd, Norman
NAY: None
ABSTAIN: None
ABSENT: None

PUBLIC COMMENT

17. Receive public comments where individuals may address the City Council on City related issues and projects not on the present agenda. Any deliberation of or decision by the City Council regarding the item being discussed shall be limited to a motion to place the item on the agenda for a subsequent meeting. (Please limit comments to three minutes or less.)

Randy Carlton, 6410 E. County Road 84, voiced concerns about several issues around the City such as traffic control, trash and homeless camps. Mr. Carlton would like to see if something can be done to improve the City.

John Williams, 2803 Fairfield Lane, wants the City to save the former headquarters of the Commemorative Air Force and not bulldoze the building. Mr. Williams proceeded to provide history of the building and what it can be used for if it's not destroyed.

Eric Stewart, 6812 E. County Road 97, President of the Professional Firefighters Association of Midland, thanked the City for their support of the Pension Review Board's recommendation. He is supportive of moving forward. Mr. Stewart also spoke on his

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concerns and improvements to those concerns that may help the City of Midland.

EXECUTIVE SESSION

Mayor Payton recessed the meeting to go to executive session at 10:22 a.m.

18. Pursuant to Texas Government Code § 551.101, the City Council will hold an Executive Session, which is closed to the public, to discuss the following matters as permitted under the following sections of the Texas Government Code:

    a. Section 551.087, Deliberate Economic Development Negotiations

        a.1. Discuss business prospects that the City seeks to have locate, stay, or expand in or near the City of Midland, Texas, and discuss possible incentives

All the business at hand having been completed, the meeting adjourned at 10:50 a.m.

PASSED AND APPROVED August 9, 2022.

_____

Patrick Payton, Mayor

ATTEST:

_____

Amy M. Turner, City Secretary

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CITY OF MIDLAND, TEXAS
MIDLAND CITY COUNCIL
SPECIAL MINUTES
August 2, 2022

The City Council convened in **Special** Session in the City Hall Council Chamber, Midland, Texas, at 10:00 AM, Tuesday, August 2, 2022.

Council Members present:	Dan Corrales, Robin Poole, Lori Blong, Patrick Payton, Scott Dufford
Council Members absent:	Jack Ladd, John Norman
Staff members present:	City Manager Robert Patrick, City Attorney John Ohnemiller, Deputy City Manager Morris Williams Jr, Assistant City Manager Tina Jauz

The meeting was called to order at 10:01 a.m.

SPECIAL SESSION

1. 2022-092 – RESOLUTION RECORDING A VOTE ON A PROPOSAL TO CONSIDER AN AD VALOREM TAX RATE FOR THE FISCAL YEAR 2022-2023 AND TO ESTABLISH A DATE TO HOLD A PUBLIC HEARING ON THE PROPOSED TAX RATE; ESTABLISHING DATES WHEN THERE WILL BE A RECORD VOTE ON THE TAX RATE; AND AUTHORIZING AND DIRECTING THE CITY MANAGER TO POST ALL APPROPRIATE NOTICES (DISTRICT: NONE) (FINANCE)

   Finance Director Christy Weakland gave an overview of the item noting that today is to establish a proposed ad valorem tax rate for the upcoming 2022-2023 fiscal year. She reviewed the various options noting that a column has been added to capture the increment from a previous year when the No New Revenue Rate was adopted. If we do not capture the increment this year, it can be captured next year. If it is not captured by the next budget cycle, the option to capture that increment will go away.

   Scott Dufford moved to approve Resolution No. 2022-092 with the increment at a rate of 0.372210; the motion died for lack of a second.

   Robin Poole moved to approve Resolution No. 2022-092 with the amendment to use the No New Revenue Rate of 0.355039; the motion died for lack of a second.

   Lori Blong moved to approve Resolution No. 2022-092 with the amendment to change the rate to the Voter Approval Rate of 0.361731; seconded by Scott Dufford.

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The motion passed by the following vote:
AYE: Corrales, Blong, Payton, Dufford
NAY: Poole
ABSTAIN: None
ABSENT: Ladd, Norman

All the business at hand having been completed, the meeting adjourned at 10:15 a.m.

PASSED AND APPROVED August 9, 2022.

Patrick Payton, Mayor

ATTEST:

Amy M. Turner, City Secretary

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City Council Meeting

Item Number: 4

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION AWARDING A CONTRACT FOR THE SOLOMON LANE PAVING BOND PROJECT TO PERMIAN PAVING, INC. OF MIDLAND, TEXAS, AT A TOTAL COST OF $1,965,616.30; APPROPRIATING FUNDS; AND AUTHORIZING PAYMENT (DISTRICT 1) (GENERAL SERVICES)

Purpose:

Resolution authorizing the execution of a contract for the Solomon Lane Paving Bond.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the GO Bond Fund 179 and will be appropriated to a project for stated purpose.

Discussion:

The City Manager approved plans and specifications and authorized advertisement for bids for the Solomon Lane Paving Bond Project. The bid request was sent to twenty-eight (28) companies. We received three (3) bids. Permian Paving, Inc. is the apparent low bidder with a bid of $1,965,616.30. Please see the attached memo from Jose Ortiz, Engineering Services Director, for more information.

Therefore, please consider a resolution awarding a contract for the Solomon Lane Paving Bond Project to Permian Paving, Inc. of Midland, Texas for the amount of $1,965,616.30. Staff is also requesting an additional $294,842.45 in contingences plus $50,000.00 for project related costs for a total cost of $2,310,458.75.

Tina Jaug

City Manager's Office

INTEROFFICE MEMORANDUM

TO: Erika Martinez; City of Midland, Purchasing Manager

FROM: Jose Ortiz; City of Midland, Engineering Services Director

SUBJECT: Solomon Lane Paving Bond Project ♦ Engr. Project No. BPU19-05 ♦ Bid Tabulation ♦ Funding #_____

DATE: July 27, 2022

Erika,

Engineer staff has reviewed the bid tabulation for the Solomon Lane Paving Bond Project, a paving bond project. Permian Paving Inc. of Midland, Texas, is the apparent successful low bidder.

Permian Paving Inc.'s bid submittal unit prices appear to be in line with current pricing trends. The Solomon Lane Paving Bond Project will be the first project Permian Paving Inc. has worked on for the City of Midland, and the first project of this size or scope that they have worked on.

Funding is available for this project.

The apparent successful bidder was selected based on the base bid amount of **$1,965,616.30** as outlined in the bidding documents. In addition, we would like to request that a 15% contingency in the amount of **$294,842.45** be allowed for value added changes to the project during construction and **$50,000.00** for project related costs incurred by the City to facilitate the contract (i.e. TDLR inspections, material testing services, etc.). The total amount made available for the project would be **$2,310,458.75**.

The agreement specifies a construction period beginning within 15 calendar days of a written notice to proceed for construction.

Jose Ortiz
Engineering Services Director

Cc: Gabe McClelland
Regina Stephenson

RESOLUTION NO. _____

RESOLUTION AWARDING A CONTRACT FOR THE SOLOMON LANE PAVING BOND PROJECT TO PERMIAN PAVING, INC. OF MIDLAND, TEXAS, AT A TOTAL COST OF $1,965,616.30; APPROPRIATING FUNDS; AND AUTHORIZING PAYMENT

WHEREAS, the City Manager approved the plans and specifications and advertised for competitive bids for the Solomon Lane Paving Bond Project (the "Project"); and

WHEREAS, Bid No. 22003460 was opened on July 13, 2022, with the lowest responsible bidder being Permian Paving, Inc. of Midland, Texas ("Contractor"), having submitted a bid of $1,965,616.30 as shown on the bid tabulation attached hereto as Exhibit "A" and incorporated herein for all legal purposes; and

WHEREAS, the total cost of the work to be completed, according to the previously advertised plans and specifications and the unit prices in Exhibit "A", shall not exceed $1,965,616.30; and

WHEREAS, the City Council finds it to be in the public interest to execute a contract with Contractor for said Project;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager and City Secretary are hereby authorized and directed to execute and attest, respectively, on behalf of the City of Midland, a contract with Contractor for said Project at a total cost not to exceed $1,965,616.30, said contract being on file in the office of the City Secretary, referenced by the date and number of this resolution.

SECTION TWO. That the City Manager is hereby authorized and directed to execute, on behalf of the City of Midland, change orders to said contract if (1) each change order involves a decrease or an increase of $50,000.00 or less and (2) the change orders, in total, do not increase the original contract price by more than $294,842.45.

SECTION THREE. That the sum of $2,310,458.75 shall be appropriated from the

the GO Bond Fund 179 to a project account for said Project.

SECTION FOUR. That the City Comptroller is hereby authorized and directed to pay Contractor pursuant to the terms of said contract and change orders executed in accordance with this resolution in an amount not to exceed $2,260,458.75 from funds available in the aforementioned project account upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

_____
Jose Ortiz, Engineering Services Director

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

BPU19-05 - City of Midland: Solomon Lane Paving Bond Project

City of Midland - Engineering Services; July 13, 2022

BID TAB					Jones Bros. Dirt & Paving Contractors, Inc.			Permian Paving Inc.			Reece Albert, Inc.		
Bid Item	Pay Note	Description	Quantity	Units	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total
1	M1	Mobilization	7	MO	$ 55,000.00	$ 385,000.00	$ 385,000.00	$ 1,000.00	$ 7,000.00	$ 7,000.00	$ 71,660.93	$ 501,626.51	$ 501,626.51
2	M2	Erosion/Sediment Control	7	MO	$ 10,000.00	$ 70,000.00	$ 70,000.00	$ 1,500.00	$ 10,500.00	$ 10,500.00	$ 612.70	$ 4,288.90	$ 4,288.90
3	M3	Traffic Control	7	MO	$ 15,000.00	$ 105,000.00	$ 105,000.00	$ 6,000.00	$ 42,000.00	$ 42,000.00	$ 4,667.38	$ 32,671.66	$ 32,671.66
4	M4	Job Site Safety	7	MO	$ 15,000.00	$ 105,000.00	$ 105,000.00	$ 1,000.00	$ 7,000.00	$ 7,000.00	$ 391.54	$ 2,740.78	$ 2,740.78
5	M5	Seeding & Stabilization	6970	SY	$ 1.00	$ 6,970.00	$ 6,970.00	$ 3.59	$ 25,022.30	$ 25,022.30	$ 2.79	$ 19,446.30	$ 19,446.30
6	M6	Spray Watering	1	LS	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 15,000.00	$ 15,000.00	$ 15,000.00	$ 9,598.56	$ 9,598.56	$ 9,598.56
1	D1	Unclassified Roadway Excavation (Depth ≤ 12")	23180	SY	$ 10.75	$ 249,185.00	$ 249,185.00	$ 4.25	$ 98,515.00	$ 98,515.00	$ 7.15	$ 165,737.00	$ 165,737.00
2	D2	Unclassified Ditch Excavation	500	CY	$ 91.75	$ 45,875.00	$ 45,875.00	$ 10.00	$ 5,000.00	$ 5,000.00	$ 34.16	$ 17,080.00	$ 17,080.00
3	D3	Removal & Disposal of Existing Unclassified Pavement	14900	SY	$ 7.00	$ 104,300.00	$ 104,300.00	$ 5.40	$ 80,460.00	$ 80,460.00	$ 1.40	$ 20,860.00	$ 20,860.00
4	D4	Removal & Disposal of Existing Unclassified Concrete Pavement	240	SY	$ 70.00	$ 16,800.00	$ 16,800.00	$ 5.40	$ 1,296.00	$ 1,296.00	$ 19.67	$ 4,720.80	$ 4,720.80
5	D5	Removal & Disposal of Existing Unclassified Driveway Approach	3020	SY	$ 28.12	$ 84,922.40	$ 84,922.40	$ 5.40	$ 16,308.00	$ 16,308.00	$ 16.39	$ 49,497.80	$ 49,497.80
6	D6	Removal & Disposal of Existing Concrete Curb & Gutter	1320	LF	$ 6.44	$ 8,500.80	$ 8,500.80	$ 5.40	$ 7,128.00	$ 7,128.00	$ 9.01	$ 11,893.20	$ 11,893.20
7	D7	Removal & Disposal of Existing Concrete Sidewalk & Ramps	20	SY	$ 19.25	$ 385.00	$ 385.00	$ 5.40	$ 108.00	$ 108.00	$ 47.64	$ 952.80	$ 952.80
8	D8	Removal & Disposal of Existing Guard Rail	45	LF	$ 22.00	$ 990.00	$ 990.00	$ 100.00	$ 4,500.00	$ 4,500.00	$ 55.18	$ 2,483.10	$ 2,483.10
1	SD1	4.0' x 2.0' Reinforced Concrete Box Culvert	120	LF	$ 500.50	$ 60,060.00	$ 60,060.00	$ 400.00	$ 48,000.00	$ 48,000.00	$ 396.49	$ 47,578.80	$ 47,578.80
2	SD2	Box Culvert Reinforced Concrete Headwall	6	EA	$ 6,490.00	$ 38,940.00	$ 38,940.00	$ 4,500.00	$ 27,000.00	$ 27,000.00	$ 13,258.82	$ 79,552.92	$ 79,552.92
3	SD2	Pipe Culvert Reinforced Concrete Headwall	2	EA	$ 2,392.50	$ 4,785.00	$ 4,785.00	$ 4,500.00	$ 9,000.00	$ 9,000.00	$ 2,694.97	$ 5,389.94	$ 5,389.94
4	SD3	Pipe Anchors & Runners for Box Culvert Headwall	6	EA	$ 2,948.00	$ 17,688.00	$ 17,688.00	$ 3,000.00	$ 18,000.00	$ 18,000.00	$ 265.93	$ 1,595.58	$ 1,595.58
5	SD3	Pipe Anchors & Runners for Pipe Culvert Headwall	2	EA	$ 1,100.00	$ 2,200.00	$ 2,200.00	$ 3,000.00	$ 6,000.00	$ 6,000.00	$ 132.96	$ 265.92	$ 265.92
6	SD4	12" Reinforced Concrete Pipe Driveway Culvert Crossing	42	LF	$ 203.50	$ 8,547.00	$ 8,547.00	$ 300.00	$ 12,600.00	$ 12,600.00	$ 92.36	$ 3,879.12	$ 3,879.12
7	SD5	Reinforced Concrete Trench Drain Driveway Culvert Crossing	102	LF	$ 858.00	$ 87,516.00	$ 87,516.00	$ 200.00	$ 20,400.00	$ 20,400.00	$ 779.61	$ 79,520.22	$ 79,520.22
1	S1	Guard Rail	45	LF	$ 550.00	$ 24,750.00	$ 24,750.00	$ 565.00	$ 25,425.00	$ 25,425.00	$ 288.09	$ 12,964.05	$ 12,964.05
2	S2	Relocate Mailbox Foundation	7	EA	$ 2,375.00	$ 16,625.00	$ 16,625.00	$ 200.00	$ 1,400.00	$ 1,400.00	$ 727.38	$ 5,091.66	$ 5,091.66
1	P1	Subgrade Preparation (Depth ≤ 8")	23180	SY	$ 11.75	$ 272,365.00	$ 272,365.00	$ 2.35	$ 54,473.00	$ 54,473.00	$ 3.25	$ 75,335.00	$ 75,335.00
2	P2	Unclassified Embankment (Density Controlled)	2060	CY	$ 67.50	$ 139,050.00	$ 139,050.00	$ 4.90	$ 10,094.00	$ 10,094.00	$ 10.87	$ 22,392.20	$ 22,392.20
3	P3	7" Jointed Concrete Pavement	1710	SY	$ 104.50	$ 178,695.00	$ 178,695.00	$ 80.00	$ 136,800.00	$ 136,800.00	$ 94.45	$ 161,509.50	$ 161,509.50
4	P4	2" Type D HMAC Asphalt Pavement Surface Course (PG70-22, 110 LBS / SY @ 1" Thick)	1880	TON	$ 147.00	$ 276,360.00	$ 276,360.00	$ 140.00	$ 263,200.00	$ 263,200.00	$ 169.67	$ 318,979.60	$ 318,979.60
5	P5	2" Type C HMAC Asphalt Pavement Surface Course (PG64-22, 110 LBS / SY @ 1" Thick)	1880	TON	$ 147.00	$ 276,360.00	$ 276,360.00	$ 140.00	$ 263,200.00	$ 263,200.00	$ 165.02	$ 310,237.60	$ 310,237.60
6	P6	Concrete-Asphalt Pavement Transition Sleeper Slab	3	EA	$ 2,750.00	$ 8,250.00	$ 8,250.00	$ 2,000.00	$ 6,000.00	$ 6,000.00	$ 4,277.45	$ 12,832.35	$ 12,832.35
7	P7	8" Flexible Base (Type A, Grade 4)	21470	SY	$ 17.00	$ 364,990.00	$ 364,990.00	$ 9.00	$ 193,230.00	$ 193,230.00	$ 13.13	$ 281,901.10	$ 281,901.10
8	P7	6" Flexible Base (Type A, Grade 4)	1710	SY	$ 20.00	$ 34,200.00	$ 34,200.00	$ 9.00	$ 15,390.00	$ 15,390.00	$ 10.21	$ 17,459.10	$ 17,459.10
9	P8	Bituminous Prime Coat (MC-30, 0.20 Gal / SY)	3420	GAL	$ 6.64	$ 22,708.80	$ 22,708.80	$ 4.80	$ 16,416.00	$ 16,416.00	$ 7.22	$ 24,692.40	$ 24,692.40
10	P9	Tack Coat (MC-30, 0.10 Gal / SY)	1710	GAL	$ 6.64	$ 11,354.40	$ 11,354.40	$ 3.10	$ 5,301.00	$ 5,301.00	$ 7.22	$ 12,346.20	$ 12,346.20
11	P10	6" Concrete Fillet	420	SY	$ 107.80	$ 45,276.00	$ 45,276.00	$ 85.00	$ 35,700.00	$ 35,700.00	$ 91.48	$ 38,421.60	$ 38,421.60
12	P11	6" Concrete Valley Gutter	540	SY	$ 107.80	$ 58,212.00	$ 58,212.00	$ 85.00	$ 45,900.00	$ 45,900.00	$ 98.92	$ 53,416.80	$ 53,416.80
13	P12	6" Concrete Driveway Approach	2330	SY	$ 119.90	$ 279,367.00	$ 279,367.00	$ 69.00	$ 160,770.00	$ 160,770.00	$ 108.06	$ 251,779.80	$ 251,779.80
14	P13	4" Concrete Sidewalk	20	SY	$ 99.00	$ 1,980.00	$ 1,980.00	$ 85.00	$ 1,700.00	$ 1,700.00	$ 83.96	$ 1,679.20	$ 1,679.20
15	P14	Type A Concrete Curb & Gutter	36	LF	$ 38.50	$ 1,386.00	$ 1,386.00	$ 20.00	$ 720.00	$ 720.00	$ 76.67	$ 2,760.12	$ 2,760.12
16	P14	Concrete Ribbon Curb & Gutter	10230	LF	$ 20.90	$ 213,807.00	$ 213,807.00	$ 18.00	$ 184,140.00	$ 184,140.00	$ 16.31	$ 166,851.30	$ 166,851.30
17	P15	Manhole Ring & Cover Adjustment	1	EA	$ 1,815.00	$ 1,815.00	$ 1,815.00	$ 500.00	$ 500.00	$ 500.00	$ 1,835.23	$ 1,835.23	$ 1,835.23
18	P15	Water Valve Box Ring & Cover Adjustment	23	EA	$ 715.00	$ 16,445.00	$ 16,445.00	$ 300.00	$ 6,900.00	$ 6,900.00	$ 801.89	$ 18,443.47	$ 18,443.47
1	T1	Retroreflectorized Pavement Markings (White, 4")(Solid)	16980	LF	$ 2.20	$ 37,356.00	$ 37,356.00	$ 2.00	$ 33,960.00	$ 33,960.00	$ 1.46	$ 24,790.80	$ 24,790.80
2	T1	Retroreflectorized Pavement Markings (White, 4")(Dot)	525	LF	$ 2.20	$ 1,155.00	$ 1,155.00	$ 10.00	$ 5,250.00	$ 5,250.00	$ 1.46	$ 766.50	$ 766.50
3	T1	Retroreflectorized Pavement Markings (Yellow, 4")(Solid/Solid)	4810	LF	$ 1.38	$ 6,637.80	$ 6,637.80	$ 2.00	$ 9,620.00	$ 9,620.00	$ 1.46	$ 7,022.60	$ 7,022.60
4	T2	Prefabricated Pavement Markings (White, 24")(Solid)	54	LF	$ 33.00	$ 1,782.00	$ 1,782.00	$ 100.00	$ 5,400.00	$ 5,400.00	$ 39.89	$ 2,154.06	$ 2,154.06
5	T3	Prefabricated Pavement Markings (White, Bike Lane Symbol)	14	EA	$ 330.00	$ 4,620.00	$ 4,620.00	$ 860.00	$ 12,040.00	$ 12,040.00	$ 398.89	$ 5,584.46	$ 5,584.46
6	T4	Rubber Median	15	EA	$ 660.00	$ 9,900.00	$ 9,900.00	$ 750.00	$ 11,250.00	$ 11,250.00	$ 797.78	$ 11,966.70	$ 11,966.70
						Base Bid Total =	$ 3,758,111.20	$ 3,758,111.20		Base Bid Total =	$ 1,965,346.30	$ 1,965,616.30		Base Bid Total =	$ 2,904,593.31	$ 2,904,593.31
							$0.00			$270.00					$0.00

BPU19-05 - City of Midland: Solomon Lane Paving Bond Project

City of Midland - Engineering Services; July 13, 2022

BID TAB					Jones Bros. Dirt & Paving Contractors, Inc.			Permian Paving Inc.			Reece Albert, Inc.		
Bid Item	Pay Note	Description	Quantity	Units	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total	Unit Price	Bid Total	Actual Bid Total
1	M1	Mobilization	7	MO	$ 55,000.00	$ 385,000.00	$ 385,000.00	$ 1,000.00	$ 7,000.00	$ 7,000.00	$ 71,660.93	$ 501,626.51	$ 501,626.51
2	M2	Erosion/Sediment Control	7	MO	$ 10,000.00	$ 70,000.00	$ 70,000.00	$ 1,500.00	$ 10,500.00	$ 10,500.00	$ 612.70	$ 4,288.90	$ 4,288.90
3	M3	Traffic Control	7	MO	$ 15,000.00	$ 105,000.00	$ 105,000.00	$ 6,000.00	$ 42,000.00	$ 42,000.00	$ 4,667.38	$ 32,671.66	$ 32,671.66
4	M4	Job Site Safety	7	MO	$ 15,000.00	$ 105,000.00	$ 105,000.00	$ 1,000.00	$ 7,000.00	$ 7,000.00	$ 391.54	$ 2,740.78	$ 2,740.78
5	M5	Seeding & Stabilization	6970	SY	$ 1.00	$ 6,970.00	$ 6,970.00	$ 3.59	$ 25,022.30	$ 25,022.30	$ 2.79	$ 19,446.30	$ 19,446.30
6	M6	Spray Watering	1	LS	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 15,000.00	$ 15,000.00	$ 15,000.00	$ 9,598.56	$ 9,598.56	$ 9,598.56
1	D1	Unclassified Roadway Excavation (Depth ≤ 12")	23180	SY	$ 10.75	$ 249,185.00	$ 249,185.00	$ 4.25	$ 98,515.00	$ 98,515.00	$ 7.15	$ 165,737.00	$ 165,737.00
2	D2	Unclassified Ditch Excavation	500	CY	$ 91.75	$ 45,875.00	$ 45,875.00	$ 10.00	$ 5,000.00	$ 5,000.00	$ 34.16	$ 17,080.00	$ 17,080.00
3	D3	Removal & Disposal of Existing Unclassified Pavement	14900	SY	$ 7.00	$ 104,300.00	$ 104,300.00	$ 5.40	$ 80,460.00	$ 80,460.00	$ 1.40	$ 20,860.00	$ 20,860.00
4	D4	Removal & Disposal of Existing Unclassified Concrete Pavement	240	SY	$ 70.00	$ 16,800.00	$ 16,800.00	$ 5.40	$ 1,296.00	$ 1,296.00	$ 19.67	$ 4,720.80	$ 4,720.80
5	D5	Removal & Disposal of Existing Unclassified Driveway Approach	3020	SY	$ 28.12	$ 84,922.40	$ 84,922.40	$ 5.40	$ 16,308.00	$ 16,308.00	$ 16.39	$ 49,497.80	$ 49,497.80
6	D6	Removal & Disposal of Existing Concrete Curb & Gutter	1320	LF	$ 6.44	$ 8,500.80	$ 8,500.80	$ 5.40	$ 7,128.00	$ 7,128.00	$ 9.01	$ 11,893.20	$ 11,893.20
7	D7	Removal & Disposal of Existing Concrete Sidewalk & Ramps	20	SY	$ 19.25	$ 385.00	$ 385.00	$ 5.40	$ 108.00	$ 108.00	$ 47.64	$ 952.80	$ 952.80
8	D8	Removal & Disposal of Existing Guard Rail	45	LF	$ 22.00	$ 990.00	$ 990.00	$ 100.00	$ 4,500.00	$ 4,500.00	$ 55.18	$ 2,483.10	$ 2,483.10
1	SD1	4.0' x 2.0' Reinforced Concrete Box Culvert	120	LF	$ 500.50	$ 60,060.00	$ 60,060.00	$ 400.00	$ 48,000.00	$ 48,000.00	$ 396.49	$ 47,578.80	$ 47,578.80
2	SD2	Box Culvert Reinforced Concrete Headwall	6	EA	$ 6,490.00	$ 38,940.00	$ 38,940.00	$ 4,500.00	$ 27,000.00	$ 27,000.00	$ 13,258.82	$ 79,552.92	$ 79,552.92
3	SD2	Pipe Culvert Reinforced Concrete Headwall	2	EA	$ 2,392.50	$ 4,785.00	$ 4,785.00	$ 4,500.00	$ 9,000.00	$ 9,000.00	$ 2,694.97	$ 5,389.94	$ 5,389.94
4	SD3	Pipe Anchors & Runners for Box Culvert Headwall	6	EA	$ 2,948.00	$ 17,688.00	$ 17,688.00	$ 3,000.00	$ 18,000.00	$ 18,000.00	$ 265.93	$ 1,595.58	$ 1,595.58
5	SD3	Pipe Anchors & Runners for Pipe Culvert Headwall	2	EA	$ 1,100.00	$ 2,200.00	$ 2,200.00	$ 3,000.00	$ 6,000.00	$ 6,000.00	$ 132.96	$ 265.92	$ 265.92
6	SD4	12" Reinforced Concrete Pipe Driveway Culvert Crossing	42	LF	$ 203.50	$ 8,547.00	$ 8,547.00	$ 300.00	$ 12,600.00	$ 12,600.00	$ 92.36	$ 3,879.12	$ 3,879.12
7	SD5	Reinforced Concrete Trench Drain Driveway Culvert Crossing	102	LF	$ 858.00	$ 87,516.00	$ 87,516.00	$ 200.00	$ 20,400.00	$ 20,400.00	$ 779.61	$ 79,520.22	$ 79,520.22
1	S1	Guard Rail	45	LF	$ 550.00	$ 24,750.00	$ 24,750.00	$ 565.00	$ 25,425.00	$ 25,425.00	$ 288.09	$ 12,964.05	$ 12,964.05
2	S2	Relocate Mailbox Foundation	7	EA	$ 2,375.00	$ 16,625.00	$ 16,625.00	$ 200.00	$ 1,400.00	$ 1,400.00	$ 727.38	$ 5,091.66	$ 5,091.66
1	P1	Subgrade Preparation (Depth ≤ 8")	23180	SY	$ 11.75	$ 272,365.00	$ 272,365.00	$ 2.35	$ 54,473.00	$ 54,473.00	$ 3.25	$ 75,335.00	$ 75,335.00
2	P2	Unclassified Embankment (Density Controlled)	2060	CY	$ 67.50	$ 139,050.00	$ 139,050.00	$ 4.90	$ 10,094.00	$ 10,094.00	$ 10.87	$ 22,392.20	$ 22,392.20
3	P3	7" Jointed Concrete Pavement	1710	SY	$ 104.50	$ 178,695.00	$ 178,695.00	$ 80.00	$ 136,800.00	$ 136,800.00	$ 94.45	$ 161,509.50	$ 161,509.50
4	P4	2" Type D HMAC Asphalt Pavement Surface Course (PG70-22, 110 LBS / SY @ 1" Thick)	1880	TON	$ 147.00	$ 276,360.00	$ 276,360.00	$ 140.00	$ 263,200.00	$ 263,200.00	$ 169.67	$ 318,979.60	$ 318,979.60
5	P5	2" Type C HMAC Asphalt Pavement Surface Course (PG64-22, 110 LBS / SY @ 1" Thick)	1880	TON	$ 147.00	$ 276,360.00	$ 276,360.00	$ 140.00	$ 263,200.00	$ 263,200.00	$ 165.02	$ 310,237.60	$ 310,237.60
6	P6	Concrete-Asphalt Pavement Transition Sleeper Slab	3	EA	$ 2,750.00	$ 8,250.00	$ 8,250.00	$ 2,000.00	$ 6,000.00	$ 6,000.00	$ 4,277.45	$ 12,832.35	$ 12,832.35
7	P7	8" Flexible Base (Type A, Grade 4)	21470	SY	$ 17.00	$ 364,990.00	$ 364,990.00	$ 9.00	$ 193,230.00	$ 193,230.00	$ 13.13	$ 281,901.10	$ 281,901.10
8	P7	6" Flexible Base (Type A, Grade 4)	1710	SY	$ 20.00	$ 34,200.00	$ 34,200.00	$ 9.00	$ 15,390.00	$ 15,390.00	$ 10.21	$ 17,459.10	$ 17,459.10
9	P8	Bituminous Prime Coat (MC-30, 0.20 Gal / SY)	3420	GAL	$ 6.64	$ 22,708.80	$ 22,708.80	$ 4.80	$ 16,416.00	$ 16,416.00	$ 7.22	$ 24,692.40	$ 24,692.40
10	P9	Tack Coat (MC-30, 0.10 Gal / SY)	1710	GAL	$ 6.64	$ 11,354.40	$ 11,354.40	$ 3.10	$ 5,301.00	$ 5,301.00	$ 7.22	$ 12,346.20	$ 12,346.20
11	P10	6" Concrete Fillet	420	SY	$ 107.80	$ 45,276.00	$ 45,276.00	$ 85.00	$ 35,700.00	$ 35,700.00	$ 91.48	$ 38,421.60	$ 38,421.60
12	P11	6" Concrete Valley Gutter	540	SY	$ 107.80	$ 58,212.00	$ 58,212.00	$ 85.00	$ 45,900.00	$ 45,900.00	$ 98.92	$ 53,416.80	$ 53,416.80
13	P12	6" Concrete Driveway Approach	2330	SY	$ 119.90	$ 279,367.00	$ 279,367.00	$ 69.00	$ 160,770.00	$ 160,770.00	$ 108.06	$ 251,779.80	$ 251,779.80
14	P13	4" Concrete Sidewalk	20	SY	$ 99.00	$ 1,980.00	$ 1,980.00	$ 85.00	$ 1,700.00	$ 1,700.00	$ 83.96	$ 1,679.20	$ 1,679.20
15	P14	Type A Concrete Curb & Gutter	36	LF	$ 38.50	$ 1,386.00	$ 1,386.00	$ 20.00	$ 720.00	$ 720.00	$ 76.67	$ 2,760.12	$ 2,760.12
16	P14	Concrete Ribbon Curb & Gutter	10230	LF	$ 20.90	$ 213,807.00	$ 213,807.00	$ 18.00	$ 184,140.00	$ 184,140.00	$ 16.31	$ 166,851.30	$ 166,851.30
17	P15	Manhole Ring & Cover Adjustment	1	EA	$ 1,815.00	$ 1,815.00	$ 1,815.00	$ 500.00	$ 500.00	$ 500.00	$ 1,835.23	$ 1,835.23	$ 1,835.23
18	P15	Water Valve Box Ring & Cover Adjustment	23	EA	$ 715.00	$ 16,445.00	$ 16,445.00	$ 300.00	$ 6,900.00	$ 6,900.00	$ 801.89	$ 18,443.47	$ 18,443.47
1	T1	Retroreflectorized Pavement Markings (White, 4")(Solid)	16980	LF	$ 2.20	$ 37,356.00	$ 37,356.00	$ 2.00	$ 33,960.00	$ 33,960.00	$ 1.46	$ 24,790.80	$ 24,790.80
2	T1	Retroreflectorized Pavement Markings (White, 4")(Dot)	525	LF	$ 2.20	$ 1,155.00	$ 1,155.00	$ 10.00	$ 5,250.00	$ 5,250.00	$ 1.46	$ 766.50	$ 766.50
3	T1	Retroreflectorized Pavement Markings (Yellow, 4")(Solid/Solid)	4810	LF	$ 1.38	$ 6,637.80	$ 6,637.80	$ 2.00	$ 9,620.00	$ 9,620.00	$ 1.46	$ 7,022.60	$ 7,022.60
4	T2	Prefabricated Pavement Markings (White, 24")(Solid)	54	LF	$ 33.00	$ 1,782.00	$ 1,782.00	$ 100.00	$ 5,400.00	$ 5,400.00	$ 39.89	$ 2,154.06	$ 2,154.06
5	T3	Prefabricated Pavement Markings (White, Bike Lane Symbol)	14	EA	$ 330.00	$ 4,620.00	$ 4,620.00	$ 860.00	$ 12,040.00	$ 12,040.00	$ 398.89	$ 5,584.46	$ 5,584.46
6	T4	Rubber Median	15	EA	$ 660.00	$ 9,900.00	$ 9,900.00	$ 750.00	$ 11,250.00	$ 11,250.00	$ 797.78	$ 11,966.70	$ 11,966.70
						Base Bid Total =	$ 3,758,111.20	$ 3,758,111.20		Base Bid Total =	$ 1,965,346.30	$ 1,965,616.30	
							$0.00			$270.00			
						Base Bid Total =	$ 2,904,593.31	$ 2,904,593.31					
							$0.00						

SPECIFICATIONS

Project Name: Solomon Lane Paving Bond Project
Project Number: BPU19-05

MAYOR

Patrick Payton

COUNCIL MEMBERS

District 1	Scott Dufford	District 3	Jack Ladd
District 2	John Norman	District 4	Lori Blong
At-Large	Dan Corrales	At Large	Robin Poole

ENGINEERING SERVICES DIRECTOR

Jose Ortiz



Prepared by City of Midland, Texas
Engineering Services Division

May 2022

NOTICE TO BIDDERS

ATTENTION: All bidders who choose to mail bid packets must address them to one of the addresses below:

USPS Mailing Address:		***Physical Address for mail carriers other than USPS:***
City of Midland, Texas		**City of Midland, Texas**
Attn: City Secretary's Office	**OR**	**Attn: City Secretary's Office**
P O Box 1152		**300 North Loraine St, Suite 330**
Midland, TX 79702		**Midland, TX 79701**

If bid packets are delivered in person then bidders must drop the bid packets off at the first-floor front desk of City Hall before the bid opening deadline.

Sealed proposals, addressed to the Mayor and City Council of the City of Midland, Texas, for the furnishing of materials and labor together with other miscellaneous and appurtenant work will be received at the office of the City Secretary, City Hall, Midland, Texas, until 2:00 p.m. on the 29th day of June, 2022, and publicly opened and read aloud at that time.

ATTENTION: The public bid opening will in the City Council Meeting Chambers

The Proposed Work provides for the furnishing of materials and labor for Solomon Lane Paving Bond Project together with other miscellaneous and appurtenant work.

ATTENTION: A NON-MANDATORY PRE-BID MEETING will be held at 3:00 p.m. on Wednesday, June 22nd, 2022 in the basement conference room of City Hall, 300 N. Loraine Street, Midland, Texas. The meeting will be held in person.

ATTENTION: All questions submitted before or after the Non-Mandatory Pre-Bid Meeting must be submitted via email to the following email address:

jferguson@midlandtexas.gov

The deadline for submitting additional questions after the Non-Mandatory Pre-Bid Meeting is Noon on Friday, June 24, 2022. Questions submitted before the Noon deadline will be included in the Addendum that will go out that same day along with all discussion items, questions, answers, and any new information resulting from the Non-Mandatory Pre-Bid Meeting. Questions submitted after the Noon deadline will not receive any additional information and will instead only be directed to the information already provided.

Bids will be received on a unit price basis.

No Bid may be withdrawn within a period of 60 days after the date fixed for opening Bids.

"FAX" or telephone bids or modifications will not be accepted.

Bid Envelopes shall be plainly marked "Proposal for City of Midland".

ATTENTION: Information for bidders, proposal forms, specifications, and plans may be obtained by emailing purchasing@midlandtexas.gov.

A bid bond or proposal guaranty is to accompany the bid, thereby guaranteeing the good faith of the bidder and that the bidder will enter into the written contract. The guaranty is to amount to five percent (5%) of the total bid and must be in the form of cash or certified check, issued by a bank satisfactory to the City of Midland, or bid bond. If in the form of cash or certified check, it is expressly understood and agreed that the City of Midland is given the right to retain such as liquidated damages if such bidder withdraws its bid anytime after such bid is opened and before official rejection of such bid, or if successful in securing the awarded thereof, such bidder fails to enter into the contract and furnish satisfactory performance and payment bonds. If a bid bond is submitted, it shall be executed on forms contained in these contract documents by a corporate surety authorized to do business in the State of Texas and acceptable to the City of Midland.

WAIVER OF ATTORNEY FEES

BY SUBMITTING A BID, BIDDER AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. THE BIDDER SPECIFICALLY AGREES THAT IF THE BIDDER BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, THE BIDDER AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH BIDDER MIGHT OTHERWISE BE ENTITLED.

BIDDER AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. THE BIDDER ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. THE BIDDER FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE OWNER AND THE BIDDER. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE BIDDER AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

WAIVER

BIDDER'S WAIVER:

BY SUBMITTING A BID, THE BIDDER AGREES TO WAIVE AND DOES HEREBY VOLUNTARILY AND INTENTIONALLY WAIVE, ABANDON AND RELINQUISH ANY CLAIM THE BIDDER HAS OR MAY HAVE IN THE FUTURE AGAINST THE CITY OF MIDLAND, TEXAS, AND THE CITY'S EMPLOYEES, AGENTS AND OFFICERS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE FOLLOWING:

1. **THE ADMINISTRATION, EVALUATION OR RECOMMENDATION OF ANY BID;**
2. **WAIVER OR DELETION OF ANY OF THE REQUIREMENTS UNDER THE BID DOCUMENTS OR THE CONTRACT DOCUMENTS;**
3. **ACCEPTANCE OR REJECTION OF ANY BIDS; OR**
4. **AWARD OF THE CONTRACT**

BY SUBMITTING A BID, THE BIDDER ACKNOWLEDGES THAT THE BIDDER UNDERSTANDS ALL OF THE TERMS OF THE BIDDING DOCUMENTS AND CONSENTS TO THE BIDDING PROCESS AND THE POSSIBILITY OF A NEGATIVE ASSESSMENT. BY SUBMITTING A BID, THE BIDDER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE BIDDER AND THE CITY OF MIDLAND, TEXAS. THE BIDDER AGREES THAT THIS IS THE INTENTIONAL RELINQUISHMENT OF A PRESENTLY EXISTING KNOWN RIGHT. BY SIGNING THE REQUEST FOR BID AND/OR BELOW, YOUR COMPANY AGREES TO THE ABOVE WAIVER(S).

City of Midland

Amy Turner
City Secretary

Form Revised May 2022

INSTRUCTION AND INFORMATION FOR BIDDERS

1. LOCATION AND EXTENT OF WORK

The work and construction contemplated to be accomplished under this Contract is located in the City of Midland, Texas, and consists of municipal public works projects as set forth in the proposal.

The location and details for the construction and related work are shown upon a set of drawings dated May 31, 2022 and numbered from 1 (1) through 64 (64) inclusive. These drawings and plans, together with the specifications, form a part of the Contract. Where figures are shown on the drawings, they shall take precedence over scaled distances and dimensions.

2. TIME AND PLACE OF RECEIVING BIDS

All bids shall be sealed, addressed to the Mayor and City Council of the City of Midland, Texas, and will be received by the City Secretary in her office at City Hall, 300 N. Loraine Street, Midland, Texas, mailing address is P.O. Box 1152, Midland, Texas 79702, until time stated on the Advertisement for Bids.

3. PREPARATION OF BID FORM

Bids shall be submitted only on the forms provided therefore in the Contract Documents, and must not be submitted in letter form or in any other form. They shall be filled out in ink in both script and figures. The Proposal form provided in the Contract Documents sets forth in detail the various items and approximate quantities thereof contained in the Project. Bids submitted in any other form will be considered irregular and will be returned to the Bidder without receiving consideration by the Owner.

All bids must be submitted in sealed envelopes bearing on the outside the name of the Bidder, his address, and the name of the Project for which the bid is submitted. It is the sole responsibility of the Bidder to see that his bid is received in proper time. Any bid received after the scheduled closing time for receipt of bids will be returned to the Bidder unopened.

The bid must be signed in the name of the Bidder and must bear the signature in longhand of the persons duly authorized to sign the bid.

Changes in or additions to the bid form, recapitulations of the work bid upon, alternative proposals, or any other modification of the bid form which is not specifically called for in the Contract Documents may result in the Owner's rejection of the bid as not being responsive to the invitation. No oral or telephonic modification of any bid submitted will be considered and a telegraphic modification may be considered only if the postmark evidences that a confirmation of the telegram duly signed by the Bidder was placed in the mail prior to the opening of bids.

The bid submitted must not contain any erasures, interlineations or other corrections unless each such correction is suitably authenticated by affixing in the margin immediately opposite the correction the surnames of the person or persons signing the bid.

4. EXAMINATION OF SITE, DRAWINGS, ETC

Each Bidder is requested to visit the site of the proposed work and fully acquaint himself with the conditions relating to the construction and labor so that he may fully understand the facilities, difficulties and restrictions attending the execution of the work under the Contract. Bidders shall thoroughly examine and be familiar with the Plans and the Specifications. The failure or omission of any Bidder to receive or examine any form, instrument, addendum or other document or to visit the site and acquaint himself with conditions there existing shall in no way relieve any Bidder from obligations with respect to his bid or to the Contract. The submission of a bid shall be taken as prima-facie evidence of compliance with this section.

5. WITHDRAWAL OF BIDS

Any Bidder may withdraw his bid, either personally, by written request, or by telegraphic request confirmed in the manner specified above, at any time prior to the scheduled closing time for receipt of bids.

6. AGREEMENT AND BONDS

The successful Bidder will be required to furnish a Performance Bond, and a Payment Bond, in an amount equal to one hundred percent (100%) of the total Contract price, such bond to be executed in five (5) original counterparts by a Corporate Surety authorized to do business in the State of Texas, and acceptable to the City of Midland. All Bonds must be executed on forms contained in these Contract Documents. The form of Agreement which the successful Bidder, and Contractor will be required to execute is also included herewith. The form of Agreement and the form of the Bonds should be carefully examined by the Bidder.

7. INTERPRETATION OF PLANS AND DOCUMENTS

If any person contemplating submitting a bid for the proposed Contract is in doubt as to the true meaning of any part of the Plans, Specifications, or other Contract Documents or finds discrepancies in, or omissions from the Plans or Specifications, he may submit to the Owner written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the Contract Documents will be made only by Addendum duly issued and a copy of such addendum will be mailed or delivered to each person receiving a set of such Contract Documents. The Owner will not be responsible for any other explanations or interpretations of the Contract Documents. No oral interpretations of any provision in the Contract Documents will be made to any Bidder.

8. BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm or corporation shall be allowed to make, or file more than one bid for the same work unless alternate bids are specifically called for. A person, firm or corporation that has submitted a sub-proposal to a Bidder, or that has quoted prices of materials to a Bidder is not thereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or making a prime proposal.

9. AWARD OF CONTRACT

The Owner reserves the right to reject any or all bids submitted and not make an award. The Owner also reserves the privilege of accepting any item as a separate contract or the combination of items of a contract. The Owner and Bidder agree that, if the Contract is awarded, that it will be awarded to either the lowest responsible bidder/proposer, or to the bidder/proposer who provides goods or services at the best value for the

City of Midland. In determining the best value for the City of Midland, the City of Midland may consider the criteria enumerated in Section 252.043 of the Texas Local Government Code. Further, the Owner reserves all rights granted by Section 271.027 of the Texas Local Government Code. The Owner reserves the right to award the bid to the lowest responsible bidder.

10. OPENING OF BIDS

Bidders are invited to be present at the opening of the Proposals. All Proposals shall be made and received with the understanding that the Bidder accepts the terms and conditions contained in the Contract Documents.

11. COMPARISON OF BIDS

All bids will be compared on the basis of the Proposal.

12. BID GUARANTY

A Certified Check, Bank Money Order, issued by a bank satisfactory to the Owner, or a Bidder's Bond on the form provided and approved by the City Attorney, in the amount of five percent (5%) of the largest possible lump sum bid submitted, payable without recourse to the Owner, must accompany the Bidder's Proposal, as a guaranty that the Bidder will enter into a Contract and execute the required Performance Bond and Guaranty in the forms provided within fifteen (15) days after notice of award of Contract to him. Bids or Proposals without the required Bid Guaranty will not be considered. All Proposals shall remain in effect for a period of thirty (30) days after date of bid opening.

13. CONTRACT DOCUMENTS

The complete Contract Documents may include the following: (1) Notice to Bidders, (2) Instructions and Information for Bidders, (3) Proposal, (4) Experience Record, (5) Bid Bond, (6) Contract Agreement, (7) Performance Bond, (8) Payment Bond, (9) Insurance Certificate, (10) General Conditions, (11) Special Conditions, (12) Detailed Specifications all of which are bound together, and/or (13) Certificate of Payment. The Contract Documents shall also include Drawings or Detailed Plans for the proposed work. A complete set of the Contract Documents and the detailed plans are on file in the Office of the City Secretary.

14. TIME ELEMENT

The work to be done under this Contract shall be commenced within fifteen (15) days from the date of the notice from the City to the Contractor to commence work. The Contractor shall commence performance of the Contract on the date stated in the City's notice to the Contractor to proceed and shall complete the performance of the Contract without delay.

15. PAYMENTS

Payments to the Contractor will be based upon the prices stated in the proposal and upon basis of the work performed as determined by the Engineer. The Engineer's determination shall be considered as final unless changes are authorized by the City in writing which shall affect the work. Upon issuance of the Certificate of Completion, the Engineer shall proceed to take final measurements and prepare a final statement of the value of all work performed and materials furnished under the terms of the agreement and shall certify same to the Owner who shall pay to the Contractor on or after the 30th day, and before the 35th day, after the date of the

Certificate of Completion, the balance due the Contractor under the terms of this agreement, provided he has fully performed his contractual obligations under the terms of this Contract, and said payment shall become due in any event upon said performance by the Contractor. Notwithstanding any provision of these Contract documents to the contrary, it is expressly understood and agreed by the parties hereto that neither the Certificate of Acceptance, nor the final or any other payment hereunder, nor any partial or total occupancy or possession of the project by the Owner, shall relieve the Contractor of his responsibility for completion of the entire project in a good workmanlike manner and in full compliance with the plans and specifications and the fulfillment of any warranties which may be required in the Contract documents.

Revised May 2022

NOTICE TO BIDDERS

IF THIS PURCHASE REQUIRES A CONTRACT, THE ATTACHED **CONTRACT AND INSURANCE REQUIREMENTS ARE NON-NEGOTIABLE**. MODIFICATIONS BY BIDDER/CONTRACTOR OF ANY MATERIAL TERM(S) TO THE CONTRACT DOCUMENTS WILL BE DEEMED A NON-RESPONSIVE BID. NON-RESPONSIVE BIDS WILL BE REJECTED. BIDDER/CONTRACTOR MUST BE WILLING TO SIGN THE CONTRACT AS IS AND WITHOUT MODIFICATIONS, PROVIDE PROPERLY EXECUTED BONDS (IF APPLICABLE) AND PROVIDE INSURANCE SPECIFICALLY AS REQUIRED WITHIN THE CONTRACT DOCUMENTS **WITHIN 21 DAYS** OF THE DATE OF THE TRANSMITTAL LETTER.

IF THE SELECTED BIDDER/CONTRACTOR CANNOT MEET THE ABOVE REQUIREMENTS, THEN **THE CITY RESERVES THE RIGHT TO AWARD THIS PURCHASE TO ANOTHER BIDDER**.

IMPORTANT NOTICE – IF THE CONTRACT DOCUMENTS REQUIRE WORKER'S COMPENSATION INSURANCE, BIDDER/CONTRACTOR MUST CARRY WORKER'S COMPENSATION INSURANCE TO BE ELIGIBLE FOR THIS CONTRACT. IF YOU CANNOT PROVIDE WORKER'S COMPENSATION INSURANCE AS REQUIRED BY STATE OF TEXAS STATUTE, WE RESPECTFULLY REQUEST THAT YOU "NO BID" THIS WORK.

COMPLIANCE: Company agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Company agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended. For further instructions on how to comply with Texas Government Code Section 2252.908 and Texas Local Government Code Section 176.006,

please go to https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm and https://www.ethics.state.tx.us/filinginfo/conflict_forms.htm.

ANY VENDOR WHO FAILS TO COMPLY WITH THE TERMS OF THE AWARD **MAY BE DECLARED AN IRRESPONSIBLE VENDOR**. BIDS SUBMITTED BY SAID VENDOR SHALL NOT BE CONSIDERED AGAIN FOR A MINIMUM PERIOD OF SIX MONTHS AS DETERMINED BY THE CITY MANAGER.

IMPORTANT NOTICE

Conflict Of Interest Reporting Requirements

Compliance with LOCAL GOVERNMENT CODE TITLE 5. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES SUBTITLE C. MATTERS AFFECTING PUBLIC OFFICERS AND EMPLOYEES OF MORE THAN ONE TYPE OF LOCAL GOVERNMENT CHAPTER 176. DISCLOSURE OF CERTAIN RELATIONSHIPS WITH LOCAL GOVERNMENT OFFICERS; PROVIDING PUBLIC ACCESS TO CERTAIN INFORMATION.

Form CIQ: This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session. This questionnaire shall be filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code. A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

Bidders are responsible for filing Conflict of Interest form "CIQ" in accordance with the above referenced statute. Failure to do so is a class C Misdemeanor. Contracts or Purchase Orders awarded to a vendor that has violated this law is subject to termination at such time that the violation is discovered with no recourse to the City of Midland. The bidder will be subsequently removed from the bidders list for a minimum of one year.

When there is no known conflict of interest as defined by the statute, it is not necessary to file/submit the Form CIQ. The form must be submitted if a conflict is subsequently discovered.

By submitting a response to this request, vendor represents that it complies with the requirements of Chapter 176 of the Texas Local Government Code.

For a current list of the local government officers go to: http://www.midlandtexas.gov/

Upon completion of the form, sign and submit with bid or mail to:

City of Midland
Attn: City Secretary
PO Box 1152
Midland, Texas 79702

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

_____

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☑ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☑ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7 John McDonald — 7-8-22

Signature of vendor doing business with the governmental entity — Date

Form provided by Texas Ethics Commission — www.ethics.state.tx.us — Revised 11/30/2015

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

CITY OF MIDLAND

Consideration of Location of Bidder's Principal Place of Business
For Bids of $50,000 up to $100,000 for Services and $500,000 for Commodities
Affidavit of Eligibility

Pursuant to Texas Local Government Code 271.9051, in purchasing real property, personal property that is not affixed to real property, or services, if the City receives one or more bids from a bidder whose principal place of business is in the City of Midland and whose bid is within five percent (5%) of the lowest bid price received by the City from a bidder who is not a resident of the City of Midland, the City may enter into a contract with:

(1) the lowest bidder; or

(2) the bidder whose principal place of business is in the City of Midland if the City Council determines, in writing, that the local bidder offers the City the best combination of contract price and additional economic development opportunities for the City of Midland created by the contract award, including the employment of residents of the City of Midland and increased tax revenues to the City of Midland.

In order to receive consideration, bidders must submit this affidavit to:

Erika Martinez
Purchasing Manager
City of Midland
300 N. Loraine St.,
PO BOX 1152
Midland, TX 79702-1152

Complete all areas below. Incomplete affidavits may be rejected.

Local Business Name: Permian Paving Inc

Local Address (must be within the City limits): 6807 Mosswood Dr Midland TX 79707

1. Is the above address the principal place of business for the business named above? ☑ Yes ☐ No
2. How many residents of the City of Midland are employed at the above business location? 4
3. Year your business was established in the City of Midland: 1995
4. If you collect sales tax for ANY class of customer, provide the following Reseller information:

   Reseller Permit Number: _____

   Company Name and Address (as it appears on permit):

   _____

   _____

   _____

5. Does your business have more than one office in the State of Texas? ☐ Yes ☑ No
   If Yes, identify the office location considered as the point-of sale for the purpose of sales tax calculation:

   _____

   _____

6. Was the local business required to pay business and/or real property tax for the most recent tax year?

   ☑ Yes ☐ No

   If Yes, did the local business pay any of this tax to the City of Midland? ☑ Yes ☐ No

Under penalty of perjury, the undersigned states that the foregoing statements are true and correct. It is further acknowledged that any person, firm, corporation or entity intentionally submitting false information to the City in an attempt to qualify for eligibility shall be prohibited from bidding on City of Midland products and services for a period of one (1) year.

Authorized Signature: John McDonald II Date: 7 8 2022

Printed Name and Title: JOHN MCDONALD II PRESIDENT

SWISS RE CORPORATE SOLUTIONS

SWISS RE CORPORATE SOLUTIONS AMERICA INSURANCE CORPORATION F/K/A NORTH AMERICAN SPECIALTY INSURANCE COMPANY ("SRCSAIC")
SWISS RE CORPORATE SOLUTIONS PREMIER INSURANCE CORPORATION F/K/A WASHINGTON INTERNATIONAL INSURANCE COMPANY ("SRCSPIC")
WESTPORT INSURANCE CORPORATION ("WIC")

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT SRCSAIC, a corporation duly organized and existing under laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri, and SRCSPIC, a corporation organized and existing under the laws of the State of Missouri and having its principal office in the City of Kansas City, Missouri, and WIC, organized under the laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri, each does hereby make, constitute and appoint:

W. LAWRENCE BROWN, TRACY TUCKER, KEVIN J. DUNN, STEVEN TUCKER and ROBERTA H. ERB

JOINTLY or SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

ONE HUNDRED TWENTY-FIVE MILLION ($125,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both SRCSAIC and SRCSPIC at meetings duly called and held on the 18th of November 2021 and WIC by written consent of its Executive Committee dated July 18, 2011.

"RESOLVED, that any two of the President, any Managing Director, any Senior Vice President, any Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is, authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Corporation bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Corporation; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Corporation may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Corporation when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."

SWISS RE CORPORATE SOLUTIONS AMERICA CORPORATE SEAL 1973 MISSOURI SWISS RE CORP

SWISS RE CORPORATE SOLUTIONS PREMIER CORPORATE SEAL MISSOURI SWISS RE CORP

By _____
Erik Janssens, Senior Vice President of SRCSAIC & Senior Vice President of SRCSPIC & Senior Vice President of WIC

By _____
Gerald Jagrowski, Vice President of SRCSAIC & Vice President of SRCSPIC & Vice President of WIC

WESTPORT INSURANCE CORPORATION CORPORATE SEAL MISSOURI

IN WITNESS WHEREOF, SRCSAIC, SRCSPIC, and WIC have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers

this 29TH day of APRIL, 2022

Swiss Re Corporate Solutions America Insurance Corporation
Swiss Re Corporate Solutions Premier Insurance Corporation
Westport Insurance Corporation

State of Illinois
County of Cook ss

On this 29TH day of APRIL, 2022, before me, a Notary Public personally appeared Erik Janssens, Senior Vice President of SRCSAIC and Senior Vice President of SRCSPIC and Senior Vice President of WIC and Gerald Jagrowski, Vice President of SRCSAIC and Vice President of SPCSPIC and Vice President of WIC, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.

YASMIN A PATEL OFFICIAL SEAL Notary Public, State of Illinois My Commission Expires May 29, 2023

Yasmin A. Patel, Notary

I, Jeffrey Goldberg, the duly elected Senior Vice President and Assistant Secretary of SRCSAIC and SRCSPIC and WIC, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said SRCSAIC and SRCSPIC and WIC, which is still in full force and effect.
IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 29th day of June, 2022.

SEAL

Jeffrey Goldberg, Senior Vice President & Assistant Secretary of SRCSAIC and SRCSPIC and WIC

TECHNICAL SPECIFICATIONS

FOR: Solomon Lane Paving Improvements

All construction for this project must conform to the City of Midland "STANDARD SPECIFICATIONS" issued by the Engineering Services Department which are herein made a part of these specifications by reference.

The bidder/contractor is to pay particular attention to the following items in the "STANDARD SPECIFICATIONS" for this project.

1) Preparation of Right of Way
2) Excavation, Embankment and Preparation of Subgrade
3) Concrete Curb and Gutter, Sidewalks, Driveways, Valley Gutters, Center Drains and Rip Rap
4) Concrete Structures
5) Flexible Base, Caliche
6) Bituminous Prime
7) Bituminous Tack
8) Hot Mix Asphaltic Concrete
9) Double Course Asphalt Surface Treatment
10) Preparation of Asphaltic Concrete Surface for Overlay or Seal Coat
11) Seal Coat
12) Asphalt –Rubber Seal Coat
13) Polymer Modified Slurry
14) PVC Pipe Casings
15) Water Line Specifications
16) Gravity Flow Sewers for Waste Water and Storm Water

The "STANDARD SPECIFICATIONS" are available from the Department of Engineering Services, City Hall, 300 North Loraine Street, Suite 510, Midland, Texas.

GENERAL CONDITIONS AND PROVISIONS

1. DEFINITIONS

The following terms as used in this contract shall be defined and interpreted as follows:

(a) "Contract" or "This Contract" or "Agreement": The particular Contract executed by the Contractor and the Owner of which these general conditions are integral parts.

(b) "Contractor": The person, firm or corporation to whom this Contract is awarded by the Owner and who is a party thereto.

(c) "Owner", "City", or pronouns instead: The entity that is a party to this Contract, contracting under the official name of the City of Midland, Texas or the City Council of the City of Midland.

(d) The words "as directed", "as required", "as permitted", "acceptable to", "satisfactory", and the words of like import, shall mean that the direction, requirement or permission of the Engineer is intended.

(e) "Engineer": The word "Engineer" used in these specifications or in this Contract means the duly authorized representative or agent of the Owner supervising the performance of the Contract and representing the Owner in his Contractual relations and negotiations with the Contractor during the period of construction. The Engineer will be represented by assistants and inspectors authorized to act for him. On all questions concerning the acceptability of material or equipment, the classifications of material, the execution of the work, conflicting interest of Contractors performing related work and the determination of costs, the decision of the Engineer shall be final, but shall not relieve the Contractor of his responsibility for completion of the entire work in a good and workmanlike manner and in full compliance with the plans and specifications.

Inspectors are required to see that all the provisions of the Contract specifications are faithfully adhered to. Any inspector may, if authorized by the Engineer, stop the work entirely if there is not sufficient quantity of suitable and approved material on the ground to carry it on properly, or for any other good and sufficient cause. Any work done in the absence of an inspector may be ordered opened up for thorough examination, and must be rebuilt or replaced at the Contractors sole expense if found to be deficient or not in accordance with the plans and specifications. But no approval by an inspector shall be construed as an acceptance of defective or improper work or material, which must be rebuilt or properly replaced whenever discovered. Inspectors have not the power to give orders or directions under any possible circumstances, except as herein defined and provided, and on authority of the Engineer

(f) "Subcontractor": Any person, firm or corporation other than an employee of the contractor, supplying, for and under agreement either with the Contractor or any subcontractor of the Contractor, labor or material, or both, at the site of the project in connection with this Contract.

(g) "Project": The structure or improvement to be constructed in whole or in part through the performance of this Contract.

(h) "Work on the Project": Such work as is performed or ordinarily would be performed at the site of the project.

(i) "Surety": Any firm or corporation executing a Surety Bond or Bonds payable to the Owner securing the performance of the Contract either in whole or in part.

(j) Whenever certain articles are specifically mentioned, by brand name or name of the manufacturer, such materials shall be taken as standard and guide for quality, operation, capacity, etc. The term "or equal" shall mean that articles of equal characteristics as required, but of different brand or manufacturer, may be substituted and accepted, subject in all instances to the approval of the Engineer.

(k) "Special Provisions", "Special Conditions", "Project Specific Specification" or "Job Specific Specifications" are included as amendment of and/or additions to the General Conditions and/or Standard Specifications for the particular project in which they are included and will take precedence over the General Conditions and Standard Specifications only in so far as the amendments and/or additions. All other provisions in the General Conditions and/or Standard Specifications will not be affected.

(l) "Drawings" "Contract Drawings", "Plans" "Detail Drawings" "Detail Sheets" or "Plans and Details" refers to the set of drawings which show the details for the construction and related work anticipated on this project and upon which bids are being solicited.

2. CONFLICT OF PROVISIONS

Unless it is specifically provided otherwise, any provision in any other part of this Contract which may be in conflict or inconsistent with any provision in the General Conditions and Provisions shall be void to the extent only of such conflict or inconsistency.

3. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR

The Contractor shall have charge of and shall be responsible for the entire work under this Contract until its completion and acceptance by the city. A competent superintendent, foreman or other representative, invested with sufficient authority to conduct the work properly, shall be maintained on the work at all times.

It is expressly agreed and understood that no decision of the Engineer or any certificate issued nor payment made to the Contractor nor partial or entire use or occupancy of the work by the Owner, shall be an acceptance of any work or materials not in accordance with this Contract, nor constitute a waiver of the Contractor's responsibility to perform the entire work in a good and workmanlike manner and in accordance with the plans and specifications.

4. TIME ELEMENT

The work shall be commenced and finished within the time set out in the Form of Contract.

The time of completion of this Contract is an essential element and consideration. Since, therefore, time is of the essence thereof, and in the event of delay in the completion of the entire work required hereunder beyond the period prescribed, or beyond the period for which time may be extended by authority of the Owner for good cause shown, the Owner shall be paid damages for such delay. Inasmuch as the amount of such damages is difficult to ascertain, it is hereby stipulated and agreed that such damages shall be liquidated and the Owner shall be paid damages at the rate as set forth in the Special Provisions, said damages to be paid to the Owner for each and every day that the Contractor be in default in completing the entire work required under this Contract. The Owner shall have the right to deduct such amounts from any monies due, or which may become due, under

this Contract. In the event that no amount for such damages is shown in the Special Provisions of these specifications, it is agreed that the amount of damages shall be Five Hundred dollars ($500.00) per day.

If during the progress of the work weather conditions, or other circumstances beyond the control of the Contractor should prevail to the extent that the work cannot be prosecuted and completed within the time specified in the Contract, the Contractor shall file with the Engineer within one week of the occurrence of such delay a request for a credit on the time of completion. Unless the Contractor files such request, the liquidated damages specified above will be enforced.

5. PAYMENT TO CONTRACTOR

ESTIMATED QUANTITIES:

This Contract, including the specifications, plans and estimate, is intended to show clearly all work to be done and material to be furnished hereunder. Where the estimated quantities are shown for the various classes of work to be done and material to be furnished under this Contract, they are approximate and are to be used only as a basis for estimating the probable cost of the work and for comparing the proposals offered for the work. It is understood and agreed that the actual amount of work to be done and material to be furnished under this Contract may differ somewhat from these estimates, and that where the basis for payment under this Contract is the unit price method, payment shall be for the actual amount of such work done and the material furnished.

Where payment is based on the unit price method, the Contractor agrees that he will make no claim for damages, anticipated profits or otherwise on account of any differences which may be found between the quantities of work actually done, the material actually furnished under this Contract and the estimated quantities contemplated and contained in the proposal provided, however, that in case the actual quantity of any major item should become as much as twenty percent (20%) more than, or twenty percent (20%) less than the estimated or contemplated quantity for such items, then either party of this agreement, upon demand, shall be entitled to a revised consideration upon the portion of the work above or below twenty percent (20%) of the estimated quantity.

A "Major Item" shall be construed to be any individual item incurred in the proposal that has a total cost equal to or greater than five percent (5%) of the total Contract cost, computed on the basis of the proposal quantities and the Contract unit price.

Any revised consideration is to be determined by agreement between the parties, otherwise by the terms of this Contract, as provided under "Extra Work".

PAYMENT; RETAINAGE:

On or before the 1st day of each month the Contractor shall prepare an itemized statement showing the total value of the work completed by the Contractor up to and including the 25th day of the preceding month; said statement shall also include the value of all sound materials delivered on the site of the work that are to be fabricated into the work. NO ESTIMATE WILL BE MADE ON UNCOMPLETED PORTIONS OF THE WORK.

After all work is completed by Contractor, including all Change Orders altering the original scope and amount of the contract are completed, and the City has inspected and approved that the work is completed and in compliance with the contract and all subsequent Change Orders, the City may thereafter issue payment to Contractor in the amount of the contract and all Change Orders. The City shall be the final judge of when the

work is completed by Contractor. The City, in its sole discretion, shall determine if the work under the contract and under any Change Orders has been done to the City's requirements.

The City may make periodic payments to Contractor; provided, however, such periodic payments may only be made pursuant to this section, and only after all work and all Change Orders are completed by Contractor and approved by the City. The approval shall be in the City's sole discretion. Requests for progress payments may be made to the extent of the materials and labor completed at the end of each month. Upon approval by the City or the City's representative, the request and invoice shall be forwarded for payment less 5% retainage. The total of these payments shall not exceed 95% of the total contract amount.

FINAL COMPLETION AND ACCEPTANCE:

Within ten (10) days after the Contractor has given the Engineer written notice that the work has been completed, or substantially completed, the Engineer and the Owner shall inspect the work and within said time, if the work be found to be completed or substantially completed in accordance with the Contract documents, the Engineer shall issue to the Owner and the Contractor his Certificate of Completion.

FINAL PAYMENT:

Upon the issuance of the Certificate of Completion, the Engineer shall proceed to make final measurements and prepare final statement of the value of all work performed and materials furnished under the terms of the Contract and shall certify same to the Owner, who shall pay to the Contractor the balance due the Contractor under the terms of this Contract, provided he has fully performed his obligations under the terms of this Contract. Notwithstanding any provision of these Contract Documents to the contrary, it is expressly understood and agreed by the parties hereto that neither the certificate of acceptance, nor the final or any other payment hereunder, nor any partial or total occupancy or possession of the project by the Owner, shall relieve the Contractor of his responsibility for completion of the entire project in a good and workmanlike manner and a full compliance with the plans and specifications and the fulfillment of any warranties which may be required in the Contract Documents.

6. OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF

In addition to the amount which the Owner may otherwise retain under the Contract, the Owner may withhold a sufficient amount or amounts of any payment or payment otherwise due to the Contractor, as in this judgment may be necessary to cover:

(a) Payments which may be past due and payable for just claims against the Contractor or any subcontractor for labor or materials furnished for the performance of this Contract.

(b) For defective work not remedied.

(c) For failure of the Contractor to make proper payments to his subcontractors.

7. CERTIFICATE OF PAYMENT

Contractor shall, prior to issuance of final payment pursuant to the terms herein stated, provide proof satisfactory to the owner that all debts, bills and expenses incurred by the Contractor, his agents, employees or subcontractors employed by him, for labor, wages, materials and other purposes, in the furtherance of this

project, have been paid and satisfied in full. Satisfactory proof shall consist of an executed Certificate of Payment.

8. EXTRA, ADDITIONAL OR OMITTED WORK PAYMENT

The Owner, upon proper action by its governing body, may require changes in this Contract, or additions to, or deductions from the work to be performed or the materials to be furnished pursuant to this Contract. No employee, agent or representative of the Owner, with the exception of the governing body authorized to award this Contract, has any power to approve any change in this Contract and it is the responsibility of the Contractor before proceeding with any change to satisfy himself that the change has been properly authorized on behalf of the Owner. No charge for any extra work or other change in the Contract will be allowed unless the extra work or change has been authorized in writing by the Owner, or its duly authorized representative, and the price therefore is stated in such written authority.

Adjustments, if any, in the amounts to be paid the Contractor where such adjustments are made by reason of additions to or deductions from the quantities of units or items bid upon in the proposal schedules, shall be paid for in accordance with the provisions of the Specifications, at the unit and/or lump sum prices bid in such proposal schedules.

Adjustments, if any, in the amounts to be paid the Contractor where such adjustments are made by reason of additions of items not appearing in the proposal schedules, or addition of work of such a nature that unit and/or lumps sum prices contained in the proposal schedules cannot reasonably or equitably be applied to provide proper payment therefore, the payment to the Contractor for such work shall be determined by one or more of the following methods:

(a) By an acceptable lump sum proposal from the Contractor.

(b) By unit prices contained in the Contractor's proposal and incorporated in the Contract or fixed by subsequent agreement between the Owner and the Contractor.

(c) By a cost method pursuant to which the Contractor shall be paid the costs of the change or addition. He shall be required to keep and present in such form as the Owner may direct, a correct account of the cost of the change or addition, together with all vouchers therefore. The cost may include an allowance for overhead and profit not to exceed fifteen percent (15%) of the net cost.

In computing the cost, there shall be considered reasonable and proper net expenditures for labor, materials, power tools and equipment, pro rata charges for foremen, deductions for social security, old age and unemployment benefits and workmen's compensation insurance and surety bond premium. In computing cost of machinery and equipment involved in additional work, the amount to be paid shall be not more than one hundred percent (100%) of the latest schedule of "Equipment Ownership Expense" adopted by Associated General Contractors of America. No overhead and profit shall be allowed on the deductions for Social Security, old age and unemployment benefits. All other expenditures shall be treated as overhead costs.

No extra work shall be performed or change made unless in pursuance of a written order from the Owner stating that the extra work or change is authorized and no claim for an addition to the Contract sum shall be valid unless so ordered; provided, however, that nothing in this Article shall excuse the Contractor from proceeding with the prosecution of the work so changed.

The Contractor shall, when required by the Owner, furnish an itemized breakdown of the quantities and prices used in computing the value of any change, addition or deduction that might be ordered.

If the Contractor should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation obligated or may obligate the Owner to pay additional compensation to the Contract, or constitutes a waiver of any provision in the Contract, he shall notify the Owner in writing of such claim within ten (10) days from the date he has actual or constructive notice of the factual basis supporting the claim. The Contractor's failure to notify the Owner within such ten (10) days period shall be deemed a waiver and relinquishment of any such claim against the Owner. The procedure for consideration of such claims shall be as stated in this Article.

9. ASSIGNMENT OF CONTRACT

The Contractor shall not assign this Contract or any part thereof, nor any monies due or to become due thereunder without the prior written consent of the Owner. No assignment of this Contract shall be valid unless it shall contain a provision that the funds to be paid to the assignee under the assignment are subject to a prior lien for services rendered or material supplied for performance of the work called for under this Contract in favor of all persons, firms, or corporations rendering such services or supplying such materials.

10. SUBCONTRACTORS

Specialty subcontractors may be utilized for the performance of such parts of the work under this Contract as, under normal practices, are performed by Specialty subcontractors, unless the Owner determines that the Contractor has heretofore customarily performed such specialty work with his own organization and is equipped to do so, or unless the Owner determines that performance of the specialty work by Specialty subcontractors will result in increased costs or inordinate delays.

The Contractor shall not subcontract any work to be performed or any materials to be furnished in the performance of this Contract without the prior written consent of the Owner. If the Contractor shall subcontract any part of this Contract, the Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractor and of the persons either directly or indirectly employed by the subcontractor as he is for the acts and omissions of persons directly employed by himself. Nothing contained in this Contract shall create any Contractual relations between any subcontractor and the Owner. The Contractor shall ensure that the sub contractor has the insurance coverage required by this contract.

The Owner's consent to or approval of any subcontract under this Contract shall not in any way relieve the Contractor of his obligations under this Contract and no such consent or approval shall be deemed to waive any provisions of this Contract.

11. SUSPENSION OF WORK

Pending settlement of disputes on any point of controversy, the Engineer may suspend action on all or any part of the work. The Contractor shall not be entitled to any claim for loss or damage by reason of such, nor shall he be entitled to extension of time, although such extension of time may be granted by the Engineer if he deems it in the interest of the work.

12. RIGHT OF OWNER TO TERMINATE CONTRACT

If, in the opinion of the Engineer, the Contractor shall be improperly performing the work under this Contract, or shall neglect or refuse to take out or rebuild such work as shall have been rejected by the Engineer as being defective or unsuitable, or if, any time, the Engineer shall be of the opinion that the work is unnecessarily delayed and will not be finished within the prescribed time, or if the Contractor shall abandon the work, or shall neglect or refuse to comply with the instructions of the Engineer relative thereto, or shall fail in any manner to comply with the Specifications or Stipulations herein contained, the Engineer shall notify the Contractor to that effect in writing, and if the Contractor shall not within five (5) days thereafter take such measures as will, in the judgment of the Engineer, insure the satisfactory performance or construction of the work, the City may annul and cancel the Contract, in which event it shall notify the Contractor to discontinue all work under this Contract, and the Contractor shall immediately respect such notice and stop work and cease to have any rights to the possession of the ground and shall forfeit his Contract. Such annulment shall not entitle the Contractor to any claim for damages on account thereof, nor shall it affect the right of the City of Midland to recover damages on account of such failure. The City Council may thereupon advertise and re-let a new Contract for the uncompleted work without further ordinance, in the same manner as was followed in the letting of this Contract, and any excess of cost arising there from over and above what would have resulted from the prices set forth in this Contract will be charged against the Contractor and his surety or sureties hereto, who shall be liable therefore.

13. RIGHT OF CONTRACTOR TO TERMINATE CONTRACT

If the work should be stopped under an order of any court or other public authority for a period of three (3) months, through no act or fault of the Contractor or of anyone employed by him, or if the City should fail to make payment to the Contractor within thirty (30) days after such payment is due, as set out in the Contract, then the Contractor may, upon seven (7) days written notice to the City and the Engineer, stop work or terminate his Contract and recover from the City payment for all work executed and for any loss sustained upon any plant or materials and reasonable profit and damages.

14. INCIDENTAL WORK

Any and all minor details of the work not specifically mentioned in the Specifications but obviously necessary for the proper completion of the work, such as the proper connection of new work to old, shall be considered as incidental to and a part of and included with the work for which the prices are named in the Contract Documents. The Contractor will not be entitled to any extra or additional compensation therefore, unless specifically stated otherwise.

15. PERMITS – COMPLIANCE WITH LAW

The Contractor shall, at his expense, obtain all permits and licenses necessary for the performance of this Contract, and give all necessary notices, pay all fees required by law, and comply with all laws, ordinances, rules and regulations governing the Contractor's performance of the Contract.

Portions of this contract qualify for exemption pursuant to the provisions of the Texas Limited Sales, Excise and Use Tax Act. The Contractor shall obtain a sales tax exemption certificate from the City. All labor performed on the project and all materials incorporated into the project qualify for such tax exemption. However, equipment and parts for equipment purchased to be used on the project, but are not incorporated into the project; do not qualify for said tax exemption. Contractor shall issue a resale certificate in lieu of paying such sales tax for all

materials incorporated into the project. Further Contractor shall separate the charges for materials incorporated into the project from the charges for labor.

16. INSPECTION BY OWNER

The Owner and its representatives shall at all times have access to all parts of the work and to the shops wherein the work is in preparation for the purpose of inspection, and the Contractor shall at all times maintain proper facilities and provide safe access for such inspection.

The Owner shall have the right to reject materials and workmanship which are defective, or to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the Owner. If the Contractor does not correct such rejected work within a reasonable time, fixed by written notice, the Owner may correct same and charge the expense to the Contractor. No inspector shall have the power to waive the obligation resting upon the Contractor to furnish good material or do work as herein prescribed, and any failure or omission of any inspector or the Engineer to condemn any defective material or work shall not release the Contractor from the obligation to at once tear out, remove and properly rebuild the same at any time upon discovery of the defect and upon receipt of notice of the Engineer to do so.

Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed by removing or tearing out any portion thereof, the Contractor shall on request promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any respect due to the fault of the Contractor or his subcontractor, he shall defray all the expenses of such examinations and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the additional cost of labor and materials necessarily involved in such examination and replacement, plus fifteen percent (15%) for overhead and profit, shall be allowed the Contractor.

Where the Specifications require work to be specifically tested or approved, it shall not be tested or covered up without timely notice to the Owner of its readiness for inspection and without the approval or consent thereto by the Owner. Should any such work be covered up without such notice, approval or consent, it must, if required by the Owner, be uncovered for examination at the Contractor's expense.

17. PATENTS

The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including all costs and legal expenses, for or on account of, any patented or unpatented invention, process, article or appliance, manufactured for or used in the performance of the Contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract.

18. MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts of neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other Contractor or subcontractor by agreement or arbitration, if such other Contractor or subcontractor will so settle. If such other Contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

The Contractor must ascertain to his own satisfaction the scope of the project and the nature of any other Contracts that have been or may be awarded by the Owner in the prosecution of the project to the end that the Contractor may perform this Contract in the light of such other Contract, if any.

Nothing herein contained shall be interpreted as granting the Contractor exclusive occupancy of the site of the project. The Contractor shall not cause any unnecessary hindrance or delay to any other Contractor working on the project. If the performance of any Contract for the project is likely to be interfered with by the simultaneous execution of some other Contract or Contracts, the Owner shall decide which Contractor shall cease work temporarily and which shall continue, or whether the work under the Contracts can be coordinated so that the Contractors may proceed simultaneously. The Owner shall not be responsible for any damages suffered or extra costs incurred by the Contractor, resulting directly or indirectly from the award or performance or attempted performance of any other Contract or Contracts on the project, or caused by any decision or omission of the Owner respective to the order of precedence in the performance of Contracts.

19. NOTICE AND SERVICE THEREOF

Any notice from one party to another under the Contract shall be in writing and shall be dated and signed by the party giving such notice or by duly authorized representative of such party. Any such notice shall not be effective for any purpose whatsoever unless served in the following manner; namely, if the notice is given to the Owner, (a) by personal delivery thereof to the individual duly authorized to direct and supervise the project of the Owner, or (b) by depositing the same in the United States Mail, enclosed in a sealed envelope, addressed to the City of Midland, 300 North Loraine Street, Midland, Texas, 79701, postage prepaid and certified; or if the notice is given to the contractor (a) by personal delivery thereof to the project superintendent or other person authorized to act for the contractor, or (b) by depositing the same in the United States Mail, enclosed in a sealed envelope, addressed to the Contractor at his regular place of business or at such other address as may have been established for the conduct of the work under this Contract, postage prepaid and certified; or (c) if the notice is given to the Surety or any other person by personal delivery to such Surety or other person, or by depositing the same in the United States Mail, enclosed in a sealed envelope addressed to such Surety or other person, at the address of such surety or other person last communicated by him to the party giving the notice, postage prepaid and certified.

20. QUALITY OF MATERIALS AND WORKMANSHIP

It is the intention of this Contract to have only first class materials and the best workmanship throughout, and the methods and appliances adopted by the Contractor must be such as will secure a satisfactory quality of work and will enable him to complete the work in the time agreed upon. If at any time such methods and appliances appear inadequate, the Engineer may order the Contractor to improve their character or increase their efficiency, and the Contractor must conform to such order; but the failure of the Engineer to order such improvement of methods or increase of efficiency will not relieve the Contractor from his obligations to perform good work or finish it in the time agreed upon. The Contractor shall submit samples or specimens of any and all materials proposed to be used in the work when required to do so by the Engineer. All materials must be of specified quality and fully equal to approved samples. All work must be done and completed in a thorough and workmanlike manner. All materials furnished and all work done must be satisfactory to the Engineer and will be subject to rigid inspection, and if not in accordance with the Specifications in the opinion of the Engineer, shall be made to conform thereto.

It is understood that except as otherwise specifically stated in the Contract, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence of temporary

construction of every nature, and all other services and facilities required for the completion of the Contract within the specified time.

21. SPECIAL METHODS

The Engineer may consent to special methods for carrying out the work in difficult cases, but the Contractor will not be relieved of responsibility for the result. The Contractor shall be responsible for the result of all work performed by him whether directed by the Engineer or not.

22. REMOVAL OR REPLACEMENT OF WORK DONE WITHOUT LINES OR GRADES

Any work done without lines or grades given by the Engineer or under his direction or without the supervision of an inspector, may be ordered removed and replaced by the Engineer at the Contractor's expense.

23. COVERING WORK

No work shall be covered until it has been examined and approved by the Engineer.

24. UNFAVORABLE WEATHER

During unfavorable weather and other adverse conditions, only such portions of the work may be done which will not be damaged thereby, unless by special means or precautions approved by the Engineer.

25. ALL WORK SUBJECT TO FINAL INSPECTION

Failure to neglect on the part of the Engineer or his inspectors to condemn or reject bad or inferior work or materials shall not be construed to imply his acceptance of such work or materials if it becomes evident at any time prior to the final acceptance of the work and the release of the Contractor.

26. PUBLIC CONVENIENCE

When materials for construction are brought on the work site they shall be neatly piled so as to cause as little obstruction to travel as possible, and so that they may be conveniently inspected.

No material or other obstruction shall be placed within five (5) feet of fire hydrants, which must at all times be readily accessible to the fire department, nor shall any material be piled within two (2) feet of any trees.

The Contractor shall be responsible for all damages to persons or property that occur as a result of his fault or negligence in connection with the prosecution of the Contract and shall be responsible for the proper care and protection of all materials delivered and work performed until completion, and final acceptance by the Owner.

The Contractor shall provide such heat, covering and enclosures as are necessary to protect all work and materials against damage by weather conditions.

The Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavement, utilities, adjoining property, and structures, and avoid damage thereto, and he shall at his own expense completely repair any damage thereto caused by his operations.

If required by the Engineer, the Contractor shall shore up, brace, underpin, and protect as may be necessary, all foundations, and other parts of all existing structures adjacent and adjoining the site of the Project, which are in any way affected by the excavations or other operations connected with the completion of the work under this Contract. Whenever any notice is required to be given by the Owner or the Contractor to any adjoining or adjacent landowner or other party before commencement of any work under this Contract, such notice shall be given by the Contractor. The Contractor shall indemnify the Owner and save it harmless from any damages on account of settlement or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

During the progress of the work the convenience of the public and of the residents along streets must be provided as far as practicable. Convenient access to driveways, houses and buildings along streets must be maintained whenever possible.

Temporary approaches and crossings of streets and sidewalks must be provided and kept in good condition whenever practicable.

The Contractor shall provide and maintain such fences, barriers, "Street Closed" signs, red lights and watchmen as may be necessary to prevent avoidable accidents to residents and to the public.

The Contractor alone shall be held responsible for all injuries to persons, and for all damages to property of the City or others, caused by or resulting from the negligence of himself, his employees or agents during the progress of or connected with the prosecution of the work, whether within the limits of the work or elsewhere. He must restore all injured public or private property to a condition as good as it was when he entered upon the work, purchasing new materials to replace all that which is injured or destroyed during the course of the work.

In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner is authorized to act at his discretion to prevent such threatened loss or injury and he shall so act.

27. TRAFFIC CONTROL

It is the policy of the City of Midland to keep at least two travel lanes open to traffic at all times and where possible to have three travel lanes between 7:30 a.m. and 9:00 a.m. and 4 p.m. and 6 p.m. (Two (2) lanes in the direction of peak travel).

At least 48 hours before beginning work the contractor shall present a traffic control and/or barricade plan prepared as per the approved Barricading Standards to the Traffic Engineering Division for review and approval. When approved and barricades are in place, they shall be inspected by the Traffic Engineering Division prior to beginning work.

Traffic control signs, such as stop signs, yield signs, etc., are placed in various intersections for the safety and protection of the traveling public. The contractor shall not move, alter or damage said signs for any reason. If said signs must be removed for construction purposes, contractor shall notify the City of Midland, Traffic Division Operations Superintendent at least 48 hours (not including weekends) before construction activities are scheduled to begin. All construction barricading, warning signs, and other construction traffic control devices shall be in place and shall be in accordance with the Texas Manual on Uniform Traffic Control Devices and approved Barricading Standards included in plans before traffic signs can be removed. The contractor shall notify the Traffic Division Operations Superintendent at least 72 hours (not including weekends) before

scheduled removal of construction barricades, warning signs, and traffic control devices. But in all cases the contractor shall not remove said barricades, warning signs, and traffic control devices until the City of Midland's Traffic Department has replaced stop signs, yield signs, etc., in their proper location. The Contractor shall notify Traffic Engineering Division at least 24 hours in advance of any Traffic Signal modification due to construction (i.e. eliminating left turn phases). Notice shall also be given to the Traffic Engineering Division at least 24 hours prior to removing barricades at signalized intersections.

28. PROTECTION OF NEW WORK

All new work shall be carefully protected by the Contractor, and any work injured from any cause before the completion of the whole project must be rebuilt by the Contractor at his own expense.

29. MONUMENTS OR STAKES

The Contractor must carefully protect from disturbance or injury all monuments, stakes and bench marks, of City County, State or Federal Government and shall not excavate nearer than five (5) feet to any of them without the permission of the Engineer, or until they have been removed, witnessed or otherwise disposed of by the Engineer.

30. USE OF COMPLETED PORTIONS

The City shall have the right to take possession of and use any completed or partially completed portions of the work notwithstanding the time for completing the entire work on such portions may not have expired; but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents. If such prior use increases the cost of, or delays the work, the Contractor shall be entitled to such extra compensation or extension of time, or both as the Engineer may determine.

The Owner, in taking possession of completed portions, shall agree to accept the decision of the Engineer on matters relating to responsibility for damages that may occur to any portions of the work during the period of possession preceding acceptance and final payment.

31. USE OF PREMISES

The Contractor shall confine his apparatus, storage of materials and construction operations to such limits as may be directed by the Owner, and shall not unreasonably encumber the premises with his materials.

The Contractor shall enforce any instructions of the Owner regarding advertising, fires, danger signals, barricades and smoking, and shall require all persons employed on the work to comply with all building, post or institutional regulations while on the premises.

32. SAFETY RESTRICTIONS

The following procedures will be followed regarding the subject item on this contract:

A warning sign painted yellow with black letters that are legible at twelve feet shall be placed inside and outside vehicles such as cranes, cranes, derricks, power shovels, drilling rigs, pile drivers, hoisting equipment or similar apparatus. The warning sign shall read as follows:

"WARNING - UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN SIX FEET OF HIGH VOLTAGE LINES."

Equipment that may be operated within ten feet of high voltage lines shall have an insulating cage type of guard about the boom or arm, except back hoes or dippers, and insulator links on the lift hook connections.

When necessary to work within six feet of high voltage electric lines, notification shall be given to the power company who will erect temporary mechanical barriers, de – energize the line, or raise or lower the line. The notifying department

The Contractor is required to make arrangements with the Power Company for the temporary relocation or raising of high voltage lines at the Contractor's sole cost and expense.

No person shall work within six feet of high voltage line without precautions having been taken and protection provided as outlined in Paragraph (3) above.

33. INSURANCE REQUIREMENTS AND WORKERS COMPENSATION

INSURANCE REQUIREMENTS

Contractor shall at all times during the term of this Contract maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):	
— Personal Injury:	$1,000,000.00 per person
	$1,000,000.00 per occurrence
— Property Damage:	$500,000.00 per occurrence
Business Automobile Liability:	$250,000.00 combined single limit -
	Personal Injury and Property Damage
Workers' Compensation:	Statutory limits
Employers' Liability:	$500,000.00 per accident or occurrence

The Commercial General Liability shall be on a per project aggregate, including completed operations, and shall be on an occurrence basis. This insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Business Automobile Liability insurance provided by Contractor shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-city vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $250,000.00 covering any vehicle used for the execution of the

work that is the subject of this Contract. This insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Workers' Compensation coverage provided by Contractor shall inure to the benefit of employees injured during the course and scope of their employment by Contractor pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of the City.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of the City. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name the City as an additional insured on a claims occurred basis. City shall be provided the notice by Contractor's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

Contractor shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this Contract to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts specified herein. All contractors, subcontractors, and sub-subcontractors shall obtain insurance policies that provide blanket waivers of subrogation in favor of the City of Midland and policies that name the City of Midland as an additional insured on a claims occurred basis (except workers' compensation).

The parties agree that, prior to the execution of the Contract, Contractor shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of the City. The City shall not be required to provide any insurance whatsoever pursuant to this Contract.

The Contractor certifies that the certificate of insurance provided as required herein complies with the requirements of Senate Bill 425, passed during the 82nd regular session of the Texas Legislature, and effective January 1, 2012. The Contractor shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of the Contractor.

34. INDEMNIFICATION

INDEMNITY: THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND THE OWNER AND ALL OF THE OWNER'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, LOSSES, PROPERTY DAMAGE AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF THE CONTRACTOR, THEIR AGENTS OR EMPLOYEES, OR ANY SUBCONTRACTOR, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS

CONTRACT, AND CONTRACTOR WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST THE OWNER OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND THE OWNER AND ALL OF THE OWNER'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES, AND EXPENSES OF ANY CHARACTER WHATSOEVER INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF THE OWNER, THE OWNER'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH THE CONTRACTOR OR THE CONTRACTOR'S EMPLOYEES, AGENTS OR SUBCONTRACTORS NEGLIGENCE IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND CONTRACTOR WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST THE OWNER OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES.

THE CONTRACTOR AGREES THAT HE WILL INDEMNIFY AND SAVE THE OWNER HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, AND FURNISHERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS, ALL SUPPLIES, INCLUDING COMMISSARY INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THIS CONTRACT. WHEN OWNER SO DESIRES, THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE THAT ALL OBLIGATIONS OF THE NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED OR WAIVED. THE CONTRACTOR, ITS SURETIES AND INSURANCE CARRIERS SHALL DEFEND, INDEMNIFY AND SAVE HARMLESS THE OWNER AND ALL OF ITS OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY CHARACTER WHATSOEVER, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ARISING FROM ANY ACT OF THE CONTRACTOR OR ANY SUBCONTRACTOR, THEIR AGENTS OR EMPLOYEES, IN THE EXECUTION AND SUPERVISION OF THIS CONTRACT, AND WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST THE OWNER OR ANY OF ITS OFFICERS, AGENTS, OR EMPLOYEES INCLUDING ATTORNEY'S FEES.

35. RELEASE

NOTWITHSTANDING ANY OTHER PROVISION, CONTRACTOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES OWNER, OWNER'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH CONTRACTOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR OWNER'S NEGLIGENCE.

36. INDEPENDENT CONTRACTOR

It is expressly understood and agreed that Contractor shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of the Owner; that Contractor shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondent superior shall not apply as between Owner and Contractor, its officers, agents, employees, contractors and subcontractors; and

that nothing herein shall be construed as creating a partnership or joint enterprise between Owner and Contractor. No person performing any of the work and services described hereunder by Contractor shall be considered an officer, agent, servant or employee of the Owner. Further, it is specifically understood and agreed that nothing in this Contract is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Contractor shall be an independent contractor under this Contract and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor hereunder. The Owner does not have the power to direct the order in which the work is done. The Owner shall not have the right to control the means, methods or details of the Contractor's work. Contractor shall assume exclusive responsibility for the work. Contractor is entirely free to do the work in its own way.

37. QUALIFICATIONS FOR EMPLOYMENT

Preference shall be given to qualified local residents in the employment of laborers and mechanics for work on the Project under this Contract. No person under the age of sixteen (16) years shall be employed on the project under this Contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others shall be employed on the Project under this Contract: Provided, that this shall not operate against the employment of physically handicapped persons, otherwise employable, where such persons may be safely assigned to work which they can ably perform. No person currently serving sentence in a penal or correctional institution and no inmate of an institution for mentally defective shall be employed on the project under this contract.

38. PAYROLLS OF CONTRACTOR AND SUBCONTRACTORS

The Contractor and each of his subcontractors shall prepare payrolls for the workers on the Project. Not later than the seventh (7th) day following the payment of wages, the Contractor shall transmit to the Owner, if requested, a certified legible copy and two confirmed copies of such payroll.

Such copies of payrolls shall be accompanied by substantial proof that all bills for services rendered and materials supplied have been duly paid and by such other data as the Owner may require.

39. POSTING WAGE RATES

The Contractor shall post at appropriate conspicuous points at the site of the Project a schedule showing the wage rates for the various classes of laborers and mechanics to be engaged in work on the Project under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

40. PAYMENT OF EMPLOYEES

The Contractor shall post at appropriate conspicuous points at the site of the Project a schedule showing the wage rates for the various classes of laborers and mechanics to be engaged in work on the Project under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.

41. WAGE UNDERPAYMENT AND ADJUSTMENTS

The Contractor agrees that, in case of underpayment of wages to any worker on the project under this Contract by the Contractor or any subcontractor, the Owner shall withhold from the Contractor out of payments due, an amount sufficient to pay such worker the difference between the wages required to be paid under this Contract and the wages actually paid such worker for the total number of hours worked and that the Owner may disburse such amount so withheld by it for and on account of the Contractor to the employee to whom such amount is due. The Contractor further agrees that the amounts to be withheld pursuant to this Article may be in addition to other amounts that may be retained by the Owner pursuant to other provisions of this Contract.

42. COMPUTATION OF WAGES ON 8 – HOUR DAY

The wages of each laborer and mechanic engaged in work on the project under this Contract shall be computed on a basis of eight (8) hours per day, eight (8) hours continuous employment except for lunch periods, constituting a day's work.

Legal holiday work shall be paid for at the regular governing per diem wage rates.

Work in excess of 40 hours per week shall be paid for at 1 ½ times the basic rate of pay.

43. OVERTIME WORK AND WORK ON SUNDAYS AND LEGAL HOLIDAYS

The Contractor will not be permitted to work on Sundays or legal holidays except in an emergency and then only upon written permission of the Engineer.

Any work necessary to be performed after regular working hours and when permitted on Sundays or legal holidays, shall be performed without additional expense to the Owner.

No work on any Contract item will be permitted before daylight or later than one hour after sundown.

44. CONTRACT SECURITY

The Contractor shall furnish a performance bond and payment bond in an amount equal to one hundred percent (l00%) of the amount of the Contract as security for the faithful performance of the Contract, including the payment of all persons performing labor on the project and furnishing of materials in connection with this Contract. All Bonds must be executed in five (5) original counterparts by a corporate surety authorized to do business in the State of Texas. Bonds executed by individuals or any other than recognized and authorized corporate surety companies will not be acceptable.

45. DELAYS

The Contractor shall receive no compensation for delays or hindrances to the work, except when, in the judgment of the Engineer, direct or unavoidable extra cost to the Contractor is caused by such hindrances or delays. When such extra compensation is claimed, a written statement thereof shall be presented by the Contractor, as provided in Paragraph 18 hereof. Such claim, if found correct, will be approved, and the decision of the Engineer whether extra cost has been incurred and the amount thereof, shall be final. If delays are caused by specific orders to stop work, given by the Engineer, or by the performance of extra work, or by unforeseen causes beyond the control of the Contractor, or by the failure of the Owner to provide materials or necessary instructions for carrying on the work, or to provide the necessary right-of-way or site for installation,

then delay will entitle the Contractor to an equivalent extension of time. Application for extension of time must be approved by the Owner and, shall not release the Sureties from their obligations, which shall remain in full force until the discharge of the Contract.

LATE COMPLETION; LIQUIDATED DAMAGES:

It is hereby understood and mutually agreed, by and between Contractor and the City, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the "Notice to Proceed." Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between Contractor and the City, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

In the event Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the City, then Contractor and Contractor's surety, if any, shall be liable for and does hereby agree, as a part consideration for the awarding of this contract, to pay to the City $500.00, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that Contractor shall be in default after the time stipulated in the contract for completing the work. Further, the City shall have the right to cancel this contract for such delay. In the event the City cancels this contract pursuant to the terms of this section, the City shall pay to Contractor only those monies deemed appropriate by the City, in its sole discretion, to compensate Contractor for any work actually performed, less any liquidated damages Contractor owes the City.

The said amount is fixed and agreed upon by and between Contractor and the City because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would in such event sustain, and said amount is agreed to be the amount of damages which the City would sustain and said amount shall be retained from time to time by the City from current periodical estimates.

It is further agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided, that Contractor shall not be charged with liquidated damages or any excess cost when the City determines, in its sole discretion, that Contractor is without fault and Contractor's reasons for the time extension are acceptable to the City. Provided, further, that Contractor shall not be charged with liquidated damages of any excess cost when the delay in completion of the work is due:

a. To any preference, priority or allocation order duly issued by the Government;

b. To unforeseeable cause beyond the control and without the fault or negligence of Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the City, acts of another contractor in the performance of a contract with the City, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and

c. To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

Provided, further, that Contractor shall, within ten (10) calendar days from the beginning of such delay, unless the City shall, in its sole discretion grant a further period of time prior to the date of final settlement of the contract, notify the City, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify Contractor within a reasonable time of its decision in the matter.

CONTRACTOR AGREES THAT THE PAYMENT OF SUCH LIQUIDATED DAMAGES MAY BE RECOVERED BY THE CITY FROM RETAINAGE HELD BY THE CITY. NOTWITHSTANDING ANY OTHER PROVISION HEREOF, CONTRACTOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY, CITY'S EMPLOYEES AND OFFICERS FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER ARISING FROM THE CITY WITHHOLDING PAYMENT FROM CONTRACTOR AS LIQUIDATED DAMAGES FOR CONTRACTOR'S FAILURE TO COMPLETE THE WORK WITHIN THE TIME SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE.

CONTRACTOR SHALL RECEIVE NO FINANCIAL COMPENSATION FOR DELAY OR HINDRANCE TO THE WORK. IN NO EVENT SHALL THE CITY BE LIABLE TO CONTRACTOR OR ANY SUBCONTRACTOR OR SUPPLIER, ANY OTHER PERSON OR ANY SURETY FOR OR ANY EMPLOYEE OR AGENT OF ANY OF THEM, FOR ANY DAMAGES ARISING OUT OF OR ASSOCIATED WITH ANY DELAY OR HINDRANCE TO THE WORK, REGARDLESS OF THE SOURCE OF THE DELAY OR HINDRANCE, INCLUDING EVENTS OF FORCE MAJEURE, AND EVEN IF SUCH DELAY OR HINDRANCE RESULTS FROM, ARISES OUT OF OR IS DUE, IN WHOLE OR IN PART, TO THE NEGLIGENCE OF THE CITY. CONTRACTOR'S SOLE REMEDY IN ANY SUCH CASE SHALL BE AN EXTENSION OF TIME.

46. ERRORS AND OMISSIONS

The Contractor will not be permitted to take advantage of any error or omission in these specifications. Suitable instructions will be given by the Engineer when such error or omission is discovered.

47. SPECIFICATIONS AND DRAWINGS

The Contractor shall keep on the work a copy of the Specifications and Drawings, and shall at all times give the Engineer access thereto. Any drawings or plans listed in the detailed specifications shall be regarded as part thereof and of the Contract. Anything mentioned in these specifications and not mentioned or shown in the drawings, or shown in the drawings and not mentioned in these specifications, shall be done as though shown or mentioned in both. The Engineer will furnish from time to time, such detailed drawings, plans, profiles and information as he may consider necessary for the Contractor's guidance.

In the event of any discrepancy between the plans and these specifications, the decisions of the Engineer will be decisive thereon. The written dimensions on the plans are to be taken as correct, but the Contractor is required to check carefully all dimensions before beginning work thereon. Should any errors or omissions be discovered, the Engineer's attention shall be called to the same, and the proper corrections made. All notes on the plans shall be carefully observed by the Contractor and are a part of the Contract.

48. CONSTRUCTION STAKING

The Engineer will furnish a complete set of plans and profiles and set control stakes at fifty foot (50') intervals along the entire length of the project and at such control points he deems necessary for proper execution of the work. The Contractor will thereafter be required to lay out the work accurately and furnish at his own expense, all lines, levels, and dimensions necessary to the proper and correct execution of the entire work and be responsible for any errors resulting from his own work.

The Contractor shall give the Engineer at least 36 hours notice in writing before requiring stakes to be set on any new portion of the work, and he shall state clearly in such notice the exact locality or localities where such stakes are needed for immediate use.

The Contractor must satisfy himself, before commencing work, as to the meaning or correctness of all stakes or marks, and no claim will be entertained by the Owner for or on account of any alleged inaccuracies, or for the alterations subsequently rendered necessary on account of such alleged inaccuracies unless the Contractor notifies the Engineer thereof in writing before commencing to work thereon.

The Contractor will at all times conduct the work in such a manner as to prevent damage to construction stakes set by the Engineer. When construction stakes are damaged to such extent that they must be reset, as a result of carelessness or negligence on the part of the Contractor or his workmen, the costs thereof shall be kept by the Engineer and shall be deducted from the moneys due or to become due the Contractor under the terms of his contract.

Benchmark and survey stakes shall be preserved by the Contractor, and in case of their destruction or removal by him or his employees, they will be replaced by the Engineer at the Contractor's expense.

49. SANITATION

The Contractor shall provide suitable drinking water receptacles or containers equipped with dust-tight covers and spigots or faucets. A supply of sanitary paper drinking cups shall be kept on hand for general use near the drinking water containers. The use of common drinking cups or tin cups will not be permitted.

The Contractor shall furnish "Porta-Johns" or other approved sanitary facilities for use by all workers on the Project. Such facilities shall be placed and kept in close proximity of the site where work is being performed. Such facilities shall be properly serviced and maintained.

The Engineer may establish such other sanitary rules and regulations as may seem necessary and desirable to the safe prosecution of the work, such rules and regulations to apply to all forces employed under this Contract, and if, the Contractor fails to observe and enforce these rules, the Engineer may enforce them at the expense of the Contractor.

50. WATER FOR CONSTRUCTION

The Contractor may obtain all water necessary for construction purposes from the Municipal Waterworks System at the regular customer service rate, but the Contractor must make all necessary arrangements with the Director of Utilities for necessary connections and meters. The Contractor must make his own provisions and provide such equipment as is necessary for conveying water from point of service to point of use. No extra compensation will be allowed and the Contractor shall anticipate the expense connected herewith and absorb said expense in the prices bid for the various bid items.

51. SEQUENCE AND SPEED OF WORK

The Engineer shall direct the order and sequence of the work. If at any time before the commencement or during the progress of the work, the materials and appliances used appear to the Engineer as insufficient and improper for securing the quality of work required or the required rate of progress, he may order the Contractor to increase their efficiency or to improve their character and the Contractor shall conform to such order. The

failure of the Engineer to demand any increase of such efficiency or improvement shall not release the Contractor from his obligations to secure the quality of work or the rate of progress specified.

52. INSPECTION AND TESTING OF MATERIAL

The sampling and testing of materials used or proposed to be used in the construction of this project will be made by the Engineer, his designated representative or certified testing laboratory personnel in accordance with methods prescribed by the American Society of Testing Materials and/or the American Association of State Highway Officials, with subsequent approved revisions made prior to the date of the Proposal. The selection of the method of test shall be designated by the Engineer. The Contractor shall bear the cost of all tests required before a material or a method is approved for use on the job, unless the Owner specifically agrees to bear the cost of these tests.

All tests required by the Owner after materials and/or methods have been approved and after they have been incorporated or used in the job will be paid for by the Owner, except if the Owner's tests reveal non-conformance with the specifications, subsequent tests on that part of the work required to determine if the replaced or reworked material meets the specifications, will be paid for by the Contractor. The City will pay only one time for any required testing.

The following is a summary of test required for the approval of materials or methods:

Material	**Test**
Subgrade	Maximum density, optimum moisture
Caliche Base:	Maximum density, optimum moisture, hardness, gradation, liquid limit, plasticity index, Texas Triaxial Classification
Aggregates for hot-mix:	Gradation, unit weight, abrasion, soundness, liquid limit, plasticity index, density
Asphalt, emulsions and tars:	Certified plant test and certificates of compliance with each shipment
Hot- Mix asphaltic concrete:	Design mix, swell test, stripping test
Portland cement concrete pavement:	Design mix with test cylinders

Any materials shipped by the Contractor from the factory prior to having satisfactorily passed such testing and inspection by the Owner's representative or prior to the receipt of notice from said representative that such testing and inspection will not be required, shall not be incorporated in the work.

The Owner may, at its discretion, approve materials and/or methods for use on this project without testing when they are from sources previously tested and approved for City of Midland projects.

53. CONSTRUCTION SCHEDULE

It shall be the responsibility of the Contractor to furnish the Construction Engineer prior to construction a schedule out – lining the anticipated time each phase of construction will begin and be completed, including sufficient time being allowed for clean – up.

54. PROFILES AND ELEVATIONS

Profiles and elevations of the ground are shown on the plans hereto attached. These profiles and elevations are believed to be reasonably correct, but are not guaranteed to be absolutely so, and are represented only as an approximation. Elevations are referred to datum given by the Engineer.

55. CLEANUP

During the progress of the work, the Contractor shall maintain the work area in a reasonably clean and safe condition. Dirt, debris, excess excavation and other objectionable materials shall be removed from the site and disposed of on a daily basis.

After completion of all the work contemplated to be done in accordance with the detailed plans and these specifications, the premises and area along the entire line of the work shall be thoroughly cleaned up and all remaining structural materials, excess or surplus excavation and debris of any nature shall be removed and disposed of in a satisfactory manner and as directed by the Engineer. The site of all work shall appear neat and finished. All portions of the project when completed shall be ready for use or occupancy.

No compensation or payment shall be made for any cleanup work. The price for such cleanup work shall be absorbed in the items covered in the proposal.

56. GUARANTEE

The contractor shall and hereby does guarantee: (1) all work performed by him directly and all work performed by his subcontractors; (2) that all material specified; and (3) that any defect due to improper workmanship or material discovered and made known to him within one year (1) f the date of final acceptance of the improvements shall be repaired, replaced, corrected or otherwise made good by him without additional expense to the Owner. The Contractor shall, in case of work performed by his subcontractors and where guarantees are required, secure guarantees from said subcontractors and deliver copies of same to the Engineer upon completion of the work.

57. WAIVER OF ATTORNEY FEES:

BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. THE CONTRACTOR SPECIFICALLY AGREES THAT IF THE CONTRACTOR BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, THE CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. THE CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN

THE OWNER AND THE CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

58. GOVERNING LAW AND VENUE

This Contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this Contract shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this Contract or the performance of this Contract shall be in Midland County, Texas. The obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas. This Contract shall be governed by, interpreted, enforced and construed under the law of the State of Texas. The laws of the State of Texas shall govern, construe and enforce all the rights and duties of the parties, including but not limited to tort claims and any and all contractual claims or disputes, arising from or relating in any way that would direct application of the laws of another jurisdiction.

59. SOVEREIGN IMMUNITY

By executing this Contract, the City is not waiving its right of sovereign immunity. The City is retaining its immunity from suit. The City is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF SOVEREIGN IMMUNITY.

60. NO THIRD – PARTY BENEFICIARY

The City's approval of this contract does not create a third party beneficiary. There is no third party beneficiary to this contract. No person or entity who is not a party to this contract shall have any third party beneficiary or other rights hereunder.

61. NOTICE OF ALLEGED BREACH; STATUTORY PREREQUISITES

As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this agreement, Contractor or his legal representative, shall give the City Manager or any other reasonable official of the City, notice in writing (consisting of one original and seven copies of notice attached to a copy of this agreement) of such damages, duly verified, within one hundred and twenty (120) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which the Contractor will settle, the physical and mailing addresses of Contractor at the time and date the claim was presented and the physical and mailing addresses of Contractor for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom the Contractor relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except the City from any liability whatsoever. The City is under no obligation to provide notice to Contractor that Contractor's notice is insufficient. City reserves the right to request additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Contractor's failure to comply with the requirements herein shall perpetually bar Contractor's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if City has actual or constructive notice or knowledge of said claim or alleged damages. Contractor agrees that the requirements of this entire Agreement are reasonable.

62. ASSIGNMENT

Contractor shall not, either directly or indirectly, assign all or any part of this contract or any interest, right or privilege herein, without the prior written consent of the owner. The issue on whether or not to grant consent to an assignment is in the sole discretion of the owner.

63. FEDERAL WAGE REQUIREMENTS

If applicable, the Davis-Bacon Act, 29 CFR 5.5, and any related acts or regulations are hereby incorporated by reference and made a part of this Contract, and all terms and requirements under said laws, by such incorporation, are made terms and requirements of this Contract, to which the parties to this Contract have agreed to be bound.

64. PROMPT PAY ACT

The owner and contractor agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

65. OTHER FEDERAL REQUIREMENTS

Company agrees that all iron or steel products produced through a manufacturing process and used in the project that is the subject of this Contract shall be produced in the United States in accordance with Government Code § 2252.202, et seq., as amended.

Updated May 2022

SPECIAL PROVISIONS

ATTENTION: All Bidders are directed to pay special attention to the NOTICE TO BIDDERS section of the bid packet. Bidders have sole responsibility for complying with the current bid process requirements. Bidders also have sole responsibility for verifying that any bid submitted is completed correctly and includes all of the required documentation, including addendums.

1. SCOPE OF WORK:

Included in this Project will be **Solomon Lane Paving Bond Project** to be performed as outlined in the Plans and Specifications, which are necessary to satisfactorily complete the work.

The project will include the removal, replacement, and installation of existing and proposed paving, sidewalk, and structure infrastructure and appurtenances including all necessary mobilization, saw-cutting, pavement removal, excavation, embankment, backfill, compaction, form work, pavement placement, sidewalk placement, structure placement, vegetation and stabilization, joint sealing, as well as erosion control, traffic control, stabilization, utility cover adjustments, coordination with City of Midland staff and organizations such as TxDOT, OSHA, franchise utilities, etc. as needed, One Call (Texas 811) notifications for pending work, notifications to adjacent property owners as directed by City of Midland staff, and all other work to be performed as outlined in the Construction Drawings and Specifications, to satisfactorily complete the work.

The Owner reserves the right to abandon, without obligation to the Contractor, any part of the project, or the entire project, at any time before the Contractor begins any construction work authorized by the Owner.

Standard Specifications for Construction of the City of Midland will govern all construction, except as modified by these Special Provisions.

2. ORDER OF PRECEDENCE:

The Special Provisions take precedence over the General Conditions in this bid packet anywhere these two sections are not in agreement.

The Special Provisions take precedence over the City of Midland Specifications in this bid packet anywhere these two sections are not in agreement.

The Contractor is to bid the quantities in the Proposal section of the bid packet even if there is a discrepancy between the Proposal quantities and those noted or measured in the construction drawing set.

In the Proposal the long-hand dollar amount written in the Description column for each bid item will take precedence over the numerical dollar amount listed in the Unit Price column if there is a discrepancy between the two.

In the construction drawing set any written or noted dimension takes precedence over dimensions measured based on the drawing scale unless otherwise directed by the Engineer.

Any changes or revisions made as part of an Addendum for this project take precedence over the original bid packet and construction drawing set where the documents are in conflict.

3. EXAMINATION OF SITE:

Prospective bidders are to make a careful examination of the entire site of the project and are to make such explorations as may be necessary to determine the subsoil and/or water conditions to be encountered; improvements and obstructions which may be encountered; methods of providing ingress-egress to private as well as public property; methods of handling traffic during construction and maintenance of the entire project as well as any section thereof, protection of all existing structures both above and below ground; and how the plans fit the proposed project and especially if any discrepancies exist.

4. PAYMENT:

Payment and retainage (five percent, 5%) shall be per the General Conditions.

Payment will be made for material installed, not for material delivery.

5. SAFETY REQUIREMENTS:

It is the responsibility of the Contractor to follow and comply at all times with Occupational Safety and Health Administration (OSHA) and all other applicable safety regulations and requirements throughout the course of the project's work.

6. SAFETY RESTRICTIONS – WORK NEAR HIGH VOLTAGE LINES:

The following procedure will be followed regarding the subject item on this contract:

1) A warning sign painted yellow with black letters that are legible at twelve feet shall be placed inside and outside vehicles such as cranes, derricks, power shovels, drilling rigs, pile drivers, hoisting equipment or similar apparatus. The warning sign shall read as follows:

   "**WARNING – UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN SIX FEET OF HIGH VOLTAGE LINES"**

2) Equipment that may be operated within ten feet of high voltage lines shall have an insulation cage-type of guard about the boom or arm, except back hoes or dippers, and insulator links on the lift hook connections.

3) When necessary to work within six feet of high voltage electric lines, notification shall be given to the power company of who will erect temporary mechanical barriers, de-energize the line, or raise or lower the line. The notifying department shall maintain an accurate log of all such calls to the Power Company, and shall record action taken in each case.

4) The Contractor is required to make arrangements with the Power Company for the temporary relocation or raising of high voltage lines at the Contractor's sole cost and expense.

5) No person shall work within six feet of a high voltage line without protection having been taken as outlined in Paragraph (3).

7. TRAFFIC CONTROL:

All proposed traffic control shall be approved by the City where applicable. All traffic control plans must be submitted to and approved by the Construction Manager no less than two (2) business days prior to starting the construction work. Traffic control for each phase of work must be approved prior to starting that work.

Generic traffic control plans or typical details may be submitted for shoulder work on any class of roadway, or for work on local or collector streets that does not require the closure of any travel lanes (i.e., all lanes are open to traffic on striped roadways, or adequate width remains available for two-way traffic on unstriped roadways). Once a generic traffic control plan or typical detail for a certain type of setup has been approved one time, the Contractor shall only be responsible for notifying the Construction Manager of the location, type of setup, and dates on which they intend to utilize the pre-approved traffic control for the duration of the contract. No additional plan submittals will be required in these cases, except that the City reserves the right to suspend this exception at its discretion. For any work not fitting the above exception, or in the event that the exception is suspended by the City, a site-specific traffic control plan will be required for each work location and time period.

1. All temporary traffic control shall be in general conformance with the *Texas Manual on Uniform Traffic Control Devices* (TMUTCD) (latest edition as adopted by the Texas Department of Transportation), except as specifically directed by the City Engineer or City Traffic Engineer.
2. All temporary traffic control shall be designed, installed, and maintained by competent and qualified personnel with adequate experience in traffic control.
3. All temporary traffic control involving multiple lane closures or traffic shifts, full closures of collector or arterial streets, traffic control extending through a railroad crossing, or any setup reasonably determined by the City to be "complex", shall be implemented only by a contractor with specific experience and expertise in the field of traffic control (i.e., a qualified "barricade company").
4. A Traffic Control Plan (TCP) shall be submitted to the Engineering Services Department, Traffic Operations Division, in advance of any work in the right-of-way that impacts traffic. No work shall occur until an approved TCP has been returned to the Contractor.
5. A copy of the approved TCP shall be kept in the possession of the person responsible for supervising the traffic control at all times while working in the right-of-way. The approved TCP shall be presented to City staff or law enforcement upon demand at any time.
6. Depending on site conditions and the nature of the work, temporary traffic control may be approved by the City for either of the following:
    a. All Times – All traffic control, including closures, may remain in place 24 hours per day until expiration of the approved TCP.
    b. Off-Peak Only – Lane or road closures are NOT permitted from 6:00-9:00 AM and 4:00-7:00 PM on weekdays (Monday through Friday). Other traffic control not related to lane or road closures may remain in place 24 hours per day until expiration of the approved TCP.
7. The contractor setting the temporary traffic control shall be responsible for the maintenance and upkeep of all signs, barricades, and other devices, at all times.
    a. All temporary traffic control setups shall be maintained at least one time per day, including weekends and holidays.
    b. More frequent maintenance shall be performed as needed, with particular emphasis to following up after severe weather events or during times of high winds.

c. Maintenance shall include:
    i. Verifying and correcting the location and orientation of all signs, barricades, and other devices;
    ii. Keeping signs and reflective areas of barricades and other devices clean and free of dirt buildup so as to maintain appropriate visibility and legibility; and
    iii. Ensuring the proper location, orientation, and operation of arrow boards or message boards, if present.

8. Arrow boards shall be required for lane closures under the following conditions:
    a. On roadways with a posted speed limit of 55 MPH or greater, for closures lasting more than one (1) hour;
    b. On roadways with a posted speed limit of 45 MPH or greater, for closures lasting more than four (4) hours;
    c. On any roadway if lanes will remain open to traffic travelling in the same direction on both sides of a closed lane during any overnight hours (from 7:00 PM to 6:00 AM); and

At other times as shown on the approved TCP, or as otherwise directed by the City.

8. DETOURS:

The Contractor is to prosecute his work in such a manner as to create a minimum of interruption to traffic and pedestrian facilities and to the flow of vehicular and pedestrian traffic within the project area.

9. PROPERTY AND RIGHT-OF-WAY ACCESS:

Access to adjacent properties must be maintained at all times unless otherwise directed by the Engineer. If the contractor will not be working in an area for a period of one week or more, special care is to be taken to address any unsafe conditions such as excavated areas or obstructions outside the worked area that could be tripping hazards, etc.

Special consideration is to be given by the Contractors for access to the Lazywood Lane and Weeping Willow Lane cul-de-sacs. The Contractor must make every reasonable effort to minimize the duration of any access interruptions to these cul-de-sacs. Residents must at all times be able to drive around the work zones on both cul-de-sacs while remaining on the existing paved road surface unless the Contractor is actively working across the road or an emergency situation requires that the road be temporarily blocked. At no point is vehicle traffic ever to be directed off of the existing public roadway in order to get around the project work zone.

Steel plates or equivalent means must be used as needed to enable vehicle access across a trench that would otherwise prevent access to a private property unless construction work is actively taking place at this location. These temporary measures are to be kept in place any time construction activity is not actively taking place, or until the trench pavement repair is complete.

No construction materials or equipment are to be stored within the Lazywood Lane or Weeping Willow Lane cul-de-sac Right-of-Ways.

10. PROPERTY AND RIGHT-OF-WAY SERVICE:

Service to adjacent properties must be maintained at all times unless otherwise directed by the Engineer. Such services include water, wastewater, fiber, cable, electric, and gas. Contractor must notify affected properties no less than two (2) business days prior to any planned service interruption.

Contractor must coordinate with the City of Midland regarding any planned service interruptions for public water or wastewater, or to restore any public infrastructure damaged during construction activities.

Contractor must coordinate with private service providers for any necessary service interruptions to their infrastructure or to restore service to their infrastructure in the event that a private service is disrupted, damaged, etc. during construction.

11. CONSTRUCTION SCHEDULE:

It is the responsibility of the Contractor to furnish the Construction Engineer, prior to construction, with a schedule outlining the anticipated time each phase of construction will begin and be completed, including sufficient time being allowed for clean-up.

12. CONSTRUCTION STAKING:

It is the responsibility of the Contractor to provide the project construction staking at fifty foot (50') intervals along the entire length of the project as well as at such control points as the Contractor deems necessary for proper execution of the work. Construction staking is to include grading and cuts as well as horizontal alignments and construction control points. Cut sheets are to be provided to the Engineer by the Contractor for review and approval.

13. SURVEY:

The Contractor is to provide GPS survey shots for all meters replaced to the City of Midland with each completed work order submittal. Survey data is to be shot in Texas Central Zone with 1983 NAD at 1.0' accuracy or better. Survey data is to be provided in Excel csv. file format with all rounding functions turned off.

14. CONSTRUCTION MATERIALS:

The Contractor is to only provide new materials for permanent installation in any and all parts of this project, and all such materials must comply with the General Conditions, the Bid Packet Specifications, and all applicable City of Midland Standards and Specifications.

For this project, the Standard Specification is hereby amended to read:

> Qualifications of Material Sources – Contractor is only to use pavement mixtures that have a proven record of acceptance by the City of Midland, or another Texas municipality, or have a proven record of meeting similar standards for state highway projects.

Concrete is only to be placed when the ambient temperature is between 40 degrees and 95 degrees Fahrenheit and the ambient temperature in the shade is higher than 40 degrees Fahrenheit or is 40 degrees Fahrenheit and rising.

All concrete pavement joints are to be sealed with Texas Department of Transportation (TxDOT) DMS-6310 SL-2 sealant, an American Society for Testing and Materials (ASTM) D 1190 Hot-Applied Single Component Joint Sealant, or a City of Midland approved equal. This will not apply to curb or sidewalk joints.

No construction materials are to be placed or installed during rain events unless they are necessary to resolve an emergency situation or to facilitate the project site erosion control measures.

15. EROSION CONTROL:

Erosion control is the responsibility of the Contractor and erosion control measures are to be implemented so as to prevent sediment erosion from wind, rain, and other elements from the project site. Should the Owner feel that supplementary erosion control measures are required in addition to those implemented by the Contractor then the Contractor will include additional erosion control measures within reason to the Owner's satisfaction and/or TCEQ requirements.

Reasonable erosion control measures include but are not limited to: construction entrance(s), concrete washout(s), perimeter silt fence or fiber wattle, rock rip-rap dams for concentrated runoff control, gutter and inlet protection measures such as sand bags, and stabilization of the construction area surfaces when construction work is not actively occurring by means of vegetative cover or seeded erosion control blankets.

Supplemental erosion control measures are ancillary to the project and not paid as a separate item, unless otherwise noted in the Proposal or Pay Notes.

Site cleanup work is to be done for this project as soon as possible as per the General Conditions and will be ancillary to the project and not paid as a separate item, unless otherwise noted in the Proposal or Pay Notes. Site cleanup is to take place throughout the project's construction as needed to maintain a clean and professional looking work area. No more than three calendar days are to elapse after completion of construction before the final roadway and right-of-way cleanup has been completed to the satisfaction of the Engineer.

16. WASTE MATERIAL:

Excess material from excavation and other construction or demolition activity will become the property of the Contractor. Excess excavation will be disposed of at locations secured by the Contractor and if necessary, approved by the Engineer. No material is to be placed on private property or City property without the approval of the Engineer and the property owner. Removal of excess material, excavation, and waste material are ancillary to the project and not paid as a separate item, unless otherwise noted in the Proposal or Pay Notes.

Excess concrete material must be washed out in a concrete washout within the project's job site area, or else any and all other concrete material washout must occur away from the job site area in the Contractor's or concrete Supplier's own operation yards or properties. Under no circumstances are concrete trucks allowed to washout in any job site excavations, channels, public right-of-way, or on private property.

17. TESTING:

It is the Contractor's responsibility to perform all required testing for any and all materials and workmanship performed or installed as part of the project's work. The cost of all such testing is to be borne solely by the Contractor unless required by the Engineer for work or materials that had previously been tested and approved and had not experienced any change in condition since that time as a result of the Contractor's work or actions; or unless additional testing outside of the project scope is performed at the request of the Engineer.

Required testing includes:

Concrete Pavement – A Slump Test is required for every cylinder set (3 test cylinders), and no less than 1 cylinder set per day when concrete is placed. Test results are to be given to the engineer upon completion of each test, with 1 cylinder set for:

A. Every 50 cubic yards of concrete placed for concrete pavement between street intersections.

B. Every 50 cubic yards of concrete placed for concrete pavement at a street intersection.

C. Every 2 sets of fillets and valley gutters at street approaches. (1 set = 2 fillets and 1 valley gutter)

D. Every 4 alley approaches or driveway approaches.

E. There will be no testing for curb, ramps, and sidewalks.

Asphalt Hot-Mix Pavement – A Nuclear Gauge Density Test is required for either each day that asphalt hot-mix is placed or for every 250 linear feet of asphalt hot-mix pass, whichever results in more frequent testing. The laboratory density limits will be a minimum limit of 96%, a maximum limit of 98%, and an optimum limit of 97%. The acceptable field density range for construction of this project is 93% - 98% with a target density of 95%. Test results are to be given to the Engineer upon completion of each test.

18. COMPLIANCE:

The said Contractor further agrees to comply with all applicable provisions of the laws and building and construction codes of the City of Midland and the State of Texas, and with any regulations for the protection of workers which may be promulgated by the Government, and will protect such work with all necessary lights, barriers, safeguards, and warnings as provided for in said specifications and the Ordinance regulations.

19. PERSONNEL:

It is the Contractor's responsibility to have a supervising representative of the Contractor on the construction site any time that construction work is taking place. The Contractor's representative must be on the Contractor's direct payroll. Sub-contractors or paid consultants will not satisfy this requirement.

It is also the Contractor's responsibility to provide the City with a reliable contact for issue escalation coordination. Such contacts would include the Contractor's site foreman, the Contractor's construction project manager, etc.

20. INTENT OF THE PROPOSAL:

The intent of the proposal is to determine the lowest responsible bidder based on the total of the quantities and unit prices. Once the lowest responsible bidder is selected, the project will be awarded based on the terms and requirements of the contract outlined in the bid packet and construction drawings.

21. CONTRACT DEADLINE:

The deadline for substantial completion of this project is ___210____ calendar days total starting from the Notice to Proceed date.

Extensions of the project deadline may be requested by the Contractor for documented excepting conditions such as weather days, delays due to conflicts with existing franchise lines, etc. which are reasonably beyond the Contractor's control. Any and all deadline extensions must be submitted by the Contractor in writing to Engineer for review, and the approval or denial of the request rests solely with the Engineer.

Unless specifically granted in writing by the Engineer, there will be no suspension of project time between phases of construction.

22. WARRANTY PERIOD:

There is a one (1) year calendar warranty period on this project for all work performed or materials installed effective immediately upon acceptance of the improvements by the Owner. The warranty period will be based on the acceptance date of the project as a whole, and not any individual phases of the project.

23. BID PACKET COMPLETION ITEMS OF NOTE:

Bidders must be willing to sign the Contract as is if a bid is submitted. Revisions, alterations, deletions, additions, or any other changes of any kind by the bidder to the bid packet or other bid documents (such as the construction drawing set, addendums, etc.) will result in the bid submittal being deemed 'Non-Responsive' and the bid will not be accepted.

Bidders are reminded to make sure that the Conflict of Interest forms are completed if applicable before submitting a bid.

All bid items in the Proposal section must be completed for a bid submittal to be considered complete. Any bid item left blank, only partially completed, or that the bidder indicates they chose to not provide a bid for will be considered incomplete, and the entire bid submittal will also be deemed incomplete, the bid submittal will be deemed 'Non-Responsive', and the bid will not be accepted. Bidders bear sole responsibility for making sure that the Proposal is complete and in accordance with the instructions provided to bidders in the bid packet.

All acknowledgement forms for all addendums that are issued during the bid process for this project must be filled out and be included with any bid submittal for that bid submittal to be considered complete. Any bid submittal lacking these completed addendum acknowledgement forms will be deemed 'Non-Responsive' and the bid will not be accepted. Bidders bear sole responsibility for making sure that they have obtained all addendums issued prior to submitting their bid.

PROPOSAL

TO: Honorable Mayor and City Council
City of Midland
Midland, Texas

Gentlemen: The undersigned bidder, having examined the drawings, specifications and contract documents, the location of the proposed work, and being fully advised as to the extent and character of the work, proposes to furnish all material, equipment, and to perform all labor and work necessary for the completion of the construction of the work described by and in accordance with the attached drawings, specifications, and contract, for the following prices, to wit:

Project Name: Solomon Lane Paving Bond Project

Project Number: BPU19-05

Miscellaneous Items

Item No.	Quantity	Description	Unit Price	Total Amount
1)	7 MO	Mobilization, furnished, installed, complete and in place, for the sum of: One Thousand dollars and Zero cents per month. (Pay Note M1)	$1,000	$7,000 00
2)	7 MO	Erosion/Sediment Control, furnished, installed, complete and in place, for the sum of: One Thousand Five Hundred dollars and Zero cents per month. (Pay Note M2)	$1500	$10,500 00
3)	7 MO	Traffic Control, furnished, installed, complete and in place, for the sum of: Six Thousand dollars and Zero cents per month. (Pay Note M3)	$6000 00	$42,000 00
4)	7 MO	Job Site Safety, furnished, installed, complete and in place, for the sum of: One Thousand dollars and Zero cents per month. (Pay Note M4)	$1000	$7,000 00
5)	6970 SY	Seeding & Stabilization, furnished, installed, complete and in place, for the sum of: Three dollars and Fifty Nine cents per square yard. (Pay Note M5)	$3.59	$25,022 36

Miscellaneous Items				
Item No.	Quantity	Description	Unit Price	Total Amount
6)	1 LS	Spray Watering, furnished, installed, complete and in place, for the sum of: Fifteen Thousand dollars and Zero cents per lump sum. (Pay Note M6)	$15,000	$15,000
Total Miscellaneous Items 1-6		$106,522.30		

Demolition Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	23180 SY	Unclassified Roadway Excavation (Depth ≤ 12"), complete and in place, for the sum of: Four dollars and Twenty Five cents per square yard. (Pay Note D1)	$ 4.25	$ 98,515 00
2)	500 CY	Unclassified Ditch Excavation, complete and in place, for the sum of: Ten dollars and Zero cents per cubic yard. (Pay Note D2)	$ 10.00	$ 5,000 00
3)	14900 SY	Removal & Dispose of Existing Unclassified Pavement, complete and in place, for the sum of: Five dollars and Forty cents per square yard. (Pay Note D3)	$ 5.40	$ 80,460 00
4)	240 SY	Removal & Disposal of Existing Unclassified Concrete Pavement, complete and in place, for the sum of: Five dollars and Forty cents per square yard. (Pay Note D4)	$ 5.40	$ 1,296 00
5)	3020 SY	Removal & Disposal of Existing Unclassified Driveway Approaches, complete and in place, for the sum of: Five dollars and Forty cents per square yard. (Pay Note D5)	$ 5.40	$ 16,308 00
6)	1320 LF	Removal & Disposal of Existing Concrete Curb & Gutter, complete and in place, for the sum of: Five dollars and Forty cents per linear foot. (Pay Note D6)	$ 5.40	$ 7,128 00
7)	20 SY	Removal & Disposal of Existing Concrete Sidewalk & Ramps, complete and in place, for the sum of: Five dollars and Forty cents per square yard. (Pay Note D7)	$ 5.40	$ 108 00

Demolition Items				
Item No.	Quantity	Description	Unit Price	Total Amount
8)	45 LF	Removal & Disposal of Existing Guard Rail, complete and in place, for the sum of: One Hundred dollars and Zero cents per linear foot. (Pay Note D8)	$ 100 00	$ 4500 00
Total Demolition Items 1-8		$ 213,315. 00		

Storm Drain Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	120 LF	4.0' x 2.0' Reinforced Concrete Box Culvert furnished, installed, complete and in place, for the sum of: Four Hundred dollars and Zero cents per linear foot. (Pay Note SD1)	$400.00	$48,000.00
2)	6 EA	Box Culvert Reinforced Concrete Headwall, furnished, installed, complete and in place, for the sum of: Fourty Five Hundred dollars and Zero cents per each. (Pay Note SD2)	$4500.00	$27,000.00
3)	2 EA	Pipe Culvert Reinforced Concrete Headwall, furnished, installed, complete and in place, for the sum of: Forty Five Hundred dollars and Zero cents per each. (Pay Note SD2)	$4500	$9000.00
4)	6 EA	Pipe Anchors & Runners for Box Culvert Headwall, furnished, installed, complete and in place, for the sum of: Three Thousand dollars and Zero cents per each. (Pay Note SD3)	$3000	$18,000.00
5)	2 EA	Pipe Anchors & Runners for Pipe Culvert Headwall, furnished, installed, complete and in place, for the sum of: Three Thousand dollars and Zero cents per each. (Pay Note SD3)	$3000.00	$6000.00
6)	42 LF	12" Reinforced Concrete Pipe furnished, installed, complete and in place, for the sum of: Three Hundred dollars and Zero cents per linear foot. (Pay Note SD4)	$300	$12,600
7)	102 LF	12" Reinforced Concrete Trench Drain, furnished, installed, complete and in place, for the sum of: Two Hundred dollars and Zero cents per linear foot. (Pay Note SD5)	$200.00	$20,400.00
Total Storm Drain Items 1-7		$141,000		

Structural Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	45 LF	Guard Rail, complete and in place, for the sum of: Five Hundred Sixty Five dollars and Zero cents per linear foot. (Pay Note S1)	$565.00	$25,425
2)	7 EA	Relocate Mailbox Foundation, furnished, installed, complete and in place, for the sum of: Two Hundred dollars and Zero cents per each. (Pay Note S2)	$200.00	$1400.00
Total Structural Items 1-2		$26,825		

Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	23180 SY	Subgrade Preparation (Depth ≤ 8"), furnished, installed, complete and in place, for the sum of: Two dollars and Thirty Five cents per square yard. (Pay Note P1)	$2.35	$54,473 00
2)	2060 CY	Unclassified Embankment (Density Controlled), furnished, installed, complete and in place, for the sum of: Four dollars and Ninety cents per cubic yard. (Pay Note P2)	$4.90	$10,094 00
3)	1710 SY	7" Jointed Concrete Pavement, furnished, installed, complete and in place, for the sum of: Eighty dollars and Zero cents per square yard. (Pay Note P3)	$80.00	$136,800 00
4)	1880 TON	2" Type D HMAC Asphalt Pavement Surface Course (PG70-22, 110 LBS / SY @ 1" Thick), furnished, installed, complete and in place, for the sum of: One Hundred Forty dollars and Zero cents per ton. (Pay Note P4)	$140.00	$263,200
5)	1880 TON	2" Type C HMAC Asphalt Pavement Surface Course (PG64-22, 110 LBS / SY @ 1" Thick), furnished, installed, complete and in place, for the sum of: One Hundred Forty dollars and Zero cents per ton. (Pay Note P5)	$140 00	$263,200
6)	3 EA	Concrete-Asphalt Pavement Transition Sleeper Slab, furnished, installed, complete and in place, for the sum of: Two Thousand dollars and Zero cents per each. (Pay Note P6)	2000 00	6000 xx
7)	21470 SY	8" Flexible Base (Type A, Grade 4), furnished, installed, complete and in place, for the sum of: Nine dollars and Zero cents per square yard. (Pay Note P7)	$9.00	$193,230

Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
8)	1710 SY	6" Flexible Base (Type A, Grade 4), furnished, installed, complete and in place, for the sum of: Nine dollars and Zero cents per square yard. (Pay Note P7)	$9.00	$15,390
9)	3420 GAL	Bituminous Prime Coat (MC-30, 0.20 Gal / SY), furnished, installed, complete and in place, for the sum of: Four dollars and Eighty cents per gallon. (Pay Note P8)	$4.80	$16,416
10)	1710 GAL	Tack Coat (MC-30, 0.10 Gal / SY), furnished, installed, complete and in place, for the sum of: Three dollars and Ten cents per gallon. (Pay Note P9)	$3.10	$5,301
11)	420 SY	6" Concrete Fillet, furnished, installed, complete and in place, for the sum of: Eighty Five dollars and Zero cents per square yard. (Pay Note P10)	$85.00	$35,700
12)	540 SY	6" Concrete Valley Gutter, furnished, installed, complete and in place, for the sum of: Eighty Five dollars and Zero cents per square yard. (Pay Note P11)	$85.00	$45,900
13)	2330 SY	6" Concrete Driveway Approach, furnished, installed, complete and in place, for the sum of: Sixty Nine dollars and Zero cents per square yard. (Pay Note P12)	$69.00	$160,770
14)	20 SY	4" Concrete Sidewalk, furnished, installed, complete and in place, for the sum of: Eighty Five dollars and Zero cents per square yard. (Pay Note P13)	$85.00	$1,700

Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
15)	36 LF	Type A Concrete Curb & Gutter, furnished, installed, complete and in place, for the sum of: Twenty dollars and Zero cents per linear foot. (Pay Note P14)	$ 20.00	$ 720
16)	10230 LF	Concrete Ribbon Curb & Gutter, furnished, installed, complete and in place, for the sum of: Eighteen dollars and Zero cents per linear foot. (Pay Note P14)	$ 18.00	$ 184,140
17)	1 EA	Manhole Ring & Cover Adjustment, furnished, installed, complete and in place, for the sum of: Five Hundred dollars and Zero cents per each. (Pay Note P15)	$ 500	$ 500.00
18)	23 EA	Water Valve Box Ring & Cover Adjustment, furnished, installed, complete and in place, for the sum of: Three Hundred dollars and Zero cents per each. (Pay Note P15)	$ 300	$ 6,900 00
Total Paving Items 1-18		$ 1,400,434.00		

Traffic Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	16,980 LF	Retroreflectorized Pavement Markings (White, 4") (TxDOT Item 666, Type I) (Solid), furnished, installed, complete and in place, for the sum of: Two dollars and Zero cents per linear foot. (Pay Note T1)	$2.00	$33,960
2)	525 LF	Retroreflectorized Pavement Markings (White, 4") (TxDOT Item 666, Type I) (Dot), furnished, installed, complete and in place, for the sum of: Ten dollars and Zero cents per linear foot. (Pay Note T1)	$10.00	$5,250
3)	4810 LF	Retroreflectorized Pavement Markings (Yellow, 4") (TxDOT Item 666, Type I) (Solid/Solid), furnished, installed, complete and in place, for the sum of: Two dollars and Zero cents per linear foot. (Pay Note T1)	$2.00	$9620 00
4)	54 LF	Prefabricated Pavement Markings (White, 24") (TxDOT Item 668) (Solid), furnished, installed, complete and in place, for the sum of: One Hundred dollars and Zero cents per linear foot. (Pay Note T2)	$100 00	$5,400 00
5)	14 EA	Prefabricated Pavement Markings (White, Bike Lane Symbol) (TxDOT Item 668), furnished, installed, complete and in place, for the sum of: Eight Hundred Sixty dollars and Zero cents per each. (Pay Note T3)	$860	$12,040 00
6)	15 EA	Rubber Median, furnished, installed, complete and in place, for the sum of: Seven Hundred FIFTY dollars and Zero cents per each. (Pay Note T4)	$750 00	$11,250
Total Traffic Items 1-6			$ 77,520	

Price For:	
1. Miscellaneous Items	$ 106,922.30
2. Demolition Items	$ 213,315.00
3. Storm Drain Items	$ 141,000.00
4. Structural Items	$ 26,825.00
5. Paving Items	$ 1,400,434.00
6. Traffic Items	$ 77,250.00
Total Price	$ 1,965,346.30

In addition to providing the individual prices for the items above, Contract shall write the total bid amount in the sum of One Million Nine Hundred Sixty Five Thousand Three Hundred Forty Six dollars and Thirty cents total.

The undersigned bidder hereby declares that he has visited the site of the work and has carefully examined the contract documents pertaining to the work covered by the above bid. The selected contractor will receive written notice to proceed.

Bidder agrees to substantially complete all work within 210 calendar days after receipt of notice to proceed.

PUBLIC INFORMATION

To the extent that Bidder is submitting a bid for a contract described by Section 552.371 of the Texas Government Code, Bidder agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this bid, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

Enclosed herewith in this proposal is a cashier's check, cash or bid bond on a form approved by the City Attorney, for 5 % dollars and _____ cents total. ($_____) which it is agreed shall be collected and retained by the owner as liquidated damages in the event this proposal is accepted by the Owner within thirty days (30) after the date advertised for the reception of bids and the undersigned fails to execute the contract and required bonds with the owner, under the

conditions thereof, within (15) days after the date said proposal is accepted; otherwise said check or bond shall be returned to the undersigned on demand.

Permian Paving Inc.

Name of Contractor

JOHN McDonald II President

Submitted By Print Name and Title

4416 Briarwood Ave Ste 116 #55

Mailing Address

Midland TX 79707

City State Zip

PAY NOTES

BPU19-05 Solomon Lane Paving Bond Project

Bid Item		Pay Quantity Note
Miscellaneous Items		
1	Mobilization	M1
2	Erosion/Sediment Control	M2
3	Traffic Control	M3
4	Job Site Safety	M4
5	Seeding & Stabilization	M5
6	Spray Watering	M6
Demolition Items		
1	Unclassified Roadway Excavation (Depth ≤ 12")	D1
2	Unclassified Ditch Excavation	D2
3	Removal & Disposal of Existing Unclassified Pavement	D3
4	Removal & Disposal of Existing Unclassified Concrete Pavement	D4
5	Removal & Disposal of Existing Unclassified Driveway Approach	D5
6	Removal & Disposal of Existing Concrete Curb & Gutter	D6
7	Removal & Disposal of Existing Concrete Sidewalk & Ramps	D7
8	Removal & Disposal of Existing Guard Rail	D8
Storm Drain Items		
1	4.0' x 2.0' Reinforced Concrete Box Culvert	SD1
2	Reinforced Concrete Headwall	SD2
3	Headwall Safety End Treatment	SD3
4	12" Reinforced Concrete Pipe Driveway Culvert Crossing	SD4
5	Reinforced Concrete Trench Drain Driveway Culvert Crossing	SD5
Structural Items		
1	Guard Rail	S1
2	Relocate Mailbox Foundation	S2
Paving Items		
1	Subgrade Preparation (Depth ≤ 8")	P1
2	Unclassified Embankment (Density Controlled)	P2
3	7" Jointed Concrete Pavement	P3
4	2" Type D HMAC Asphalt Pavement Surface Course (PG70-22, 110 LBS / SY @ 1" Thick)	P4
5	2" Type C HMAC Asphalt Pavement Surface Course (PG64-22, 110 LBS / SY @ 1" Thick)	P5
6	Concrete-Asphalt Pavement Transition Sleeper Slab	P6
7	8" Flexible Base (Type A, Grade 4)	P7
8	6" Flexible Base (Type A, Grade 4)	P7
9	Bituminous Prime Coat (MC-30, 0.20 Gal / SY)	P8
10	Tack Coat (MC-30, 0.10 Gal / SY)	P9
11	6" Concrete Fillet	P10
12	6" Concrete Valley Gutter	P11
13	6" Concrete Driveway Approach	P12
14	4" Concrete Sidewalk	P13
15	Type A Concrete Curb & Gutter	P14
16	Concrete Ribbon Curb & Gutter	P14
17	Manhole Ring & Cover Adjustment	P15
18	Water Valve Box Ring & Cover Adjustment	P15

Traffic Items

1	Retroreflectorized Pavement Markings (White, 6")(Solid)	T1
2	Retroreflectorized Pavement Markings (White, 6")(Dot)	T1
3	Retroreflectorized Pavement Markings (Yellow, 4")(Solid)	T1
4	Prefabricated Pavement Markings (White, 24")	T2
5	Prefabricated Pavement Markings (White, Bike Lane Symbol)	T3
6	Rubber Median	T4

PAY QUANTITY NOTES

M1 Includes the necessary equipment, labor, materials, and incidentals for all Mobilization to the job site complete and in place. Measurement and payment to be made per month.

M2 Includes the necessary equipment, labor, materials, and incidentals to implement the Erosion Control Plan per the construction drawings and City of Midland standards and specifications. Measurement and payment to be made per month.

M3 Includes the necessary equipment, labor, materials, and incidentals to implement the Traffic Control per the approved Traffic Control Plan. Any required traffic control devices are to meet the City of Midland Traffic Division Standards. Measurement and payment to be made per month.

M4 Includes the necessary equipment, labor, materials, and incidentals to implement Job Site Safety and to provide a safe work environment for the project work area (including all personal protection equipment, trench safety, etc.) per the construction drawings and in compliance with all applicable Federal, State, and Local requirements or regulations including those of OSHA and the City of Midland. JOB SITE SAFETY IS THE RESPONSABILITY OF THE CONTRACTOR. Measurement and payment to be made per month.

M5 Includes the necessary equipment, labor, materials, and incidentals for Seeding & Stabilization per the construction drawings and City of Midland standards and specifications, including all removal, storage, and replacement of existing topsoil as well as all seeding and appurtenances. Watering is addressed in a separate pay note. Measurement and payment to be made per square yard measured along the ground surface.

M6 Includes the necessary equipment, labor, materials, and incidentals for Spray Watering per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per lump sum.

D1 Includes the necessary equipment, labor, materials, and incidentals for Unclassified Excavation per the construction drawings and City of Midland standards and specifications including all existing pavement and sub-structure removal, unclassified excavation, material removal, and appurtenances. Measurment and payment to be per square yard measured along the ground surface.

D2 Includes the necessary equipment, labor, materials, and incidentals for Unclassified Excavation per the construction drawings and City of Midland standards and specifications including all existing pavement and sub-structure removal, unclassified excavation, material removal, and appurtenances. Measurment and payment to be per cubic yard of material removed.

D3 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Pavement per the construction drawings and City of Midland standards and specifications including all pavement removal, saw-cutting, and appurtenances. Depths given are approximate and pavement material is to be removed in its entirety. No additional compensation will be made for increased pavement depth removal. Measurement and payment to be made per square yard measured along the ground surface.

D4 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Concrete Pavement per the construction drawings and City of Midland standards and specifications including all pavement removal, saw-cutting, and appurtenances. Depths given are approximate and pavement material is to be removed in its entirety. No additional compensation will be made for increased pavement depth removal. Measurement and payment to be made per square yard measured along the ground surface.

D5 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Driveway Approach per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

D6 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Concrete Curb & Gutter per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot measured along the back of curb.

D7 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Concrete Sidewalk & Ramps per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

D8 Includes the necessary equipment, labor, materials, and incidentals to Remove & Dispose of Existing Guard Rail per the construction drawings and City of Midland standards and specifications, including removal of all, columns, posts, foundations, anchors, gates, frames, and structures as well as all excavation, backfill, cutting, and appurtenances. Measurement and payment to be made per linear foot measures along the ground surface following the guard rail centerline through all structures and appurtenances.

SD1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Reinforced Concrete Box Culvert per the construction drawings and City of Midland standards and specifications, including all embedment, detector wire, tracer tape, necessary testing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the box culvert centerline through all structures and appurtenances.

SD2 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Reinforced Concrete Headwall per the construction drawings and City of Midland standards and specifications, including all formes, reinforcment, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per each concrete headwall installed.

SD3 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Headwall Safety End Treatment per the construction drawings and City of Midland standards and specifications, including all formes, reinforcment, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per each concrete headwall installed.

SD4 Includes the necessary equipment, labor, materials, and incidentals for the installation of Reinforced Concrete Pipe Driveway Culvert Crossing per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, base, forms, pipe, reinforcement, structures, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all structures and appurtenances.

SD5 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Reinforced Concrete Trench Drain Driveway Culvert Crossing per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, base, forms, pipe, reinforcement, structures, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the trench drain centerline through all structures and appurtenances.

S1 Includes the necessary equipment, labor, materials, and incidentals to install a Guard Rail per the construction drawings and City of Midland standards and specifications, including all columns, posts, foundations, anchors, and structures as well as all excavation, backfill, cutting, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the guard rail centerline through all structures and appurtenances.

S2 Includes the necessary equipment, labor, materials, and incidentals to Relocate Mailbox Foundation per the construction drawings and City of Midland standards and specifications, including all structure removal, foundation placement, and appurtenances. Measurement and payment to be made per each existing mailbox foundation removed and new mailbox foundation set.

P1 Includes the necessary equipment, labor, materials, and incidentals for Subgrade Preparation per the construction drawings and City of Midland standards and specifications, including all proof-rollling, sub-grade reworking, scarifying, compaction, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P2 Includes the necessary equipment, labor, materials, and incidentals for placement of Unclassified Embankment per the construction drawings and City of Midland standards and specifications, including all sprinkling, rolling, correction of soft spots, grading, sloping, compaction, and appurtenances. Measurement and payment to be made per each cubic yard placed.

P3 Includes the necessary equipment, labor, materials, and incidentals for placement of Jointed Concrete Pavement per the construction drawings and City of Midland standards and specifications, including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P4 Includes the necessary equipment, labor, materials, and incidentals for the placement of Type "D" HMAC Asphalt Pavement Surface Course (PG 70-22, 110 LBS / SY at 1" thick) per the construction drawings and City of Midland standards and specifications, including all placement, compaction, and appurtenances. Measurement and payment to be made per ton of material placed.

P5 Includes the necessary equipment, labor, materials, and incidentals for the placement of Type "C" HMAC Asphalt Pavement Surface Course (PG 64-22, 110 LBS / SY at 1" thick) per the construction drawings and City of Midland standards and specifications, including all placement, compaction, and appurtenances. Measurement and payment to be made per ton of material placed.

P6 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete-Asphalt Pavement Transition Sleeper Slab per the construction drawings and City of Midland standards and specifications, including all forming, reinforcement, placement, finishing, and appurtenances. Measurement and payment to be made per each.

P7 Includes the necessary equipment, labor, materials, and incidentals for placement of Flexible Base compacted to 95% Density, ASTM D1557, per the construction drawings and City of Midland standards and specifications including all placement, compaction, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P8 Includes the necessary equipment, labor, materials, and incidentals for application of Bituminous Prime Coat (MC-30, 0.20 GAL / SY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per gallon of material applied at the designated rate.

P9 Includes the necessary equipment, labor, materials, and incidentals for application of Tack Coat (MC-30, 0.10 GAL / SY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per gallon of material applied at the designated rate.

P10 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Fillet per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Curb section is formed and poured monolithically with fillet and is not a separate bid item. Measurement and payment to be made per square yard measured along the ground surface.

P11 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Valley Gutter per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P12 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Driveway Approach per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Pedestrian access ramps at the driveway approach are considered part of the approach and are not a separate bid item. Measurement and payment to be made per square yard measured along the ground surface.

P13 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Sidewalk per the construction drawings and City of Midland standards and specifications, including all forming, reinforcement, placement, jointing, finishing, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P14 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Curb & Gutter per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the back-of-curb.

P15 Includes the necessary equipment, labor, materials, and incidentals for Ring & Cover Adjustment per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. This includes a minimum 1.0' wide concrete collar whose width is measured from the outer edge of the cover to the outer edge of the concrete ring. Measurement and payment to be made per each adjustment made.

T1 Includes the necessary equipment, labor, materials, and incidentals for the placement of Retroreflectorized Pavement Markings per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot placed.

T2 Includes the necessary equipment, labor, materials, and incidentals for the placement of Prefabricated Pavement Markings per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot placed.

T3 Includes the necessary equipment, labor, materials, and incidentals for the placement of Prefabricated Pavement Markings per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per each marking placed.

T4 Includes the necessary equipment, labor, materials, and incidentals for the installation of Rubber Median per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot post installed.

BID BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

SURETY NO N/A

KNOW ALL MEN BY THESE PRESENTS, THAT Permian Paving Inc. (Hereinafter called the Principal), as Principal, and Swiss Re Corporate Solutions Premier Insurance Corporation (Hereinafter called the Surety, as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of Five Percent (5%) of the Greatest Amount Bid - Dollars ($ - - - 5% - - -) for the payment whereof the said Principal and surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid or Proposal to enter into a certain written contract for the construction of Solomon Lane Paving Bond Project.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully, enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREE that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection to such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either of such events, shall be entitled and is hereby given the right to collect the full amount of this Bid Bond as liquidated damage.

PROVIDED, further that if any legal action be filed upon this Bond venue shall be in Midland County, Texas.

IN WITNESS WHEREOF, the said Principal and surety do sign and seal this instrument, this 29th day of June, 2022.

Permian Paving Inc.
Principal

By: John McDonald, Jr., President

Address: 4416 Briarwood Suite 110 #55
Midland, TX 79707

Swiss Re Corporate Solutions
Premier Insurance Corporation
Surety

By: Kevin J. Dunn, Attorney-In-Fact

Address: 1200 Main Street, Suite 800
Kansas City, MO 64105

APPROVED AS TO FORM:

City Attorney

NOTE: Attach Power of Attorney

Form Revised May 2022

BidB 2

BID BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND § SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ (Hereinafter called the Principal), as Principal, and _____ (Hereinafter called the Surety, as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____ Dollars ($ _____) for the payment whereof the said Principal and surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid or Proposal to enter into a certain written contract for the construction of Solomon Lane Paving Bond Project.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully, enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREE that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection to such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either of such events, shall be entitled and is hereby given the right to collect the full amount of this Bid Bond as liquidated damage.

PROVIDED, further that if any legal action be filed upon this Bond venue shall lie in Midland County, Texas.

IN WITNESS WHEREOF, the said Principal and surety do sign and seal this instrument, this _____ day of _____ , 20___.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: Attach Power of Attorney

CONTRACT

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

THIS CONTRACT, made and entered into this 10th day of August, 2022, by and between the City of Midland of the County of Midland and State of Texas, acting through its Mayor thereunto duly authorized so to do, Party of the First Part, hereinafter termed OWNER, and Permian Paving Inc. of the City Midland, County of Midland, State of Texas, Party of the Second Part, herein-after termed CONTRACTOR.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Party of the first Part (OWNER), and under the conditions expressed in the bond bearing even date herewith, the said Party of the Second Part (CONTRACTOR), hereby agrees with the said Party of the First Part (OWNER) to commence and complete the construction of certain improvements described as follows: Solomon Lane Paving Bond Project together with appurtenances and incidentals.

Conditions of the Contract and at his (or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendent, labor, insurance and other accessories and services necessary to complete the said construction in accordance with the conditions and prices stated in the Proposal attached hereto, and in accordance with the Notice to the Contractors, General and Special Conditions of Agreement, Plans and other drawings and printed or written explanatory matter thereof, and the Specifications and addenda therefore as prepared by Engineering and Transportation Department of the City of Midland, Texas, herein entitled the ENGINEER, together with the CONTRACTOR'S written Proposal, the General Conditions of the Contract, and the Performance and Payment Bonds hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire Contract.

The CONTRACTOR hereby agrees to commence work within fifteen (15) calendar days after the written notice to do so and to substantially complete the same within 210 calendar days after receipt of notice to proceed, subject to such extensions of time as are provided by the General and Special Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds the price or prices shown in the proposal, which forms a part of this Contract, such payments to be subject to the General and Special Conditions of the Contract.

The SUM TOTAL of this Contract shall be: $1,965,616.30.

INSURANCE

Contractor shall at all times during the term of this Contract maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):	
— Personal Injury:	$1,000,000.00 per person
	$1,000,000.00 per occurrence
— Property Damage:	$500,000.00 per occurrence
Business Automobile Liability:	$250,000.00 combined single limit - Personal Injury and Property Damage
Workers' Compensation:	Statutory limits
Employers' Liability:	$500,000.00 per accident or occurrence

The Commercial General Liability shall be on a per project aggregate, including completed operations, and shall be on an occurrence basis. This insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Business Automobile Liability insurance provided by Contractor shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-city vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $250,000.00 covering any vehicle used for the execution of the

work that is the subject of this Contract. The insurance shall name the City as an additional insured and waive subrogation in favor of the City.

The Workers' Compensation coverage provided by Contractor shall inure to the benefit of employees injured during the course and scope of their employment by Contractor pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of the City.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of the City. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name the City as an additional insured on a claims occurred basis. City shall be provided the notice by Contractor's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

Contractor shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this Contract to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts specified herein. All contractors, subcontractors, and sub-subcontractors shall obtain insurance policies that provide blanket waivers of subrogation in favor of the City of Midland and policies that name the City of Midland as an additional insured on a claims occurred basis (except workers' compensation).

The parties agree that, prior to the execution of the Contract, Contractor shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of the City. The City shall not be required to provide any insurance whatsoever pursuant to this Contract.

The Contractor certifies that the certificate of insurance provided as required herein complies with the requirements of Senate Bill 425, passed during the 82nd regular session of the Texas Legislature, and effective January 1, 2012. The Contractor shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of the Contractor.

WAIVER OF ATTORNEY FEES

WAIVER OF ATTORNEY FEES: BY EXECUTING THIS CONTRACT, CONTRACTOR AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST THE OWNER, REGARDING THE AWARD OF ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THE CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE CONTRACT. THE CONTRACTOR SPECIFICALLY AGREES THAT IF THE CONTRACTOR BRINGS OR COMMENCES

ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMEDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, THE CONTRACTOR AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH CONTRACTOR MIGHT OTHERWISE BE ENTITLED.

CONTRACTOR AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. THE CONTRACTOR ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN THE OWNER AND THE CONTRACTOR. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE CONTRACTOR AND OWNER ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION.

SOVEREIGN IMMUNITY

By executing this Contract, the City is not waiving its right of sovereign immunity. The City is retaining its immunity from suit. The City is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF SOVEREIGN IMMUNITY.

GOVERNING LAW AND VENUE

This Contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this Contract shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this Contract or the performance of this Contract shall be in Midland County, Texas. The obligations and undertakings of each of the parties to this Contract shall be deemed to have occurred in Midland County, Texas.

COMPLIANCE – Contractor agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. Contractor agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended.

VERIFICATION

To the extent that Sections 2271.002 and 2274.002 of the Texas Government Code (collectively, the "Anti-Boycott Statutes") apply to this Contract, Contractor hereby verifies:

- that Contractor does not boycott Israel and will not boycott Israel during the term of this Contract;
- that Contractor does not boycott energy companies and will not boycott energy companies during the term of this Contract; and
- that Contractor does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of this Contract against a firearm entity or firearm trade association.

To the extent that the Anti-Boycott Statutes do not apply to this Contract, such verification is not required, and Contractor shall be deemed to have not made such verification.

RECORDS RETENTION AND PRODUCTION OF INFORMATION

To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Contractor shall (1) preserve all contracting information related to the Contract as provided by the records retention requirements applicable to the City of Midland for the duration of the contract, (2) promptly provide to the City of Midland any contracting information related to the Contract that is in the custody or possession of Contractor on request of the City of Midland, and (3) on completion of the Contract, either (i) provide at no cost to the City of Midland all contracting information related to the Contract that is in the custody or possession of Contractor, or (ii) preserve the contracting information related to the Contract as provided by the records retention requirements applicable to the City of Midland.

PUBLIC INFORMATION

To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, Contractor agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The

requirements of Subchapter J, Chapter 552, Government Code, may apply to this contract, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

Parties of the First Part (Owner)

By: _____
Patrick Payton, Mayor

ATTEST:

_____
Amy Turner, City Secretary

APPROVED ONLY AS TO FORM:

By: _____
John Ohnemiller, City Attorney

By: _____
Party of the Second Part (CONTRACTOR)

By: _____
Title

THE STATE OF _____ §

COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this _____ day of _____, 20__ personally appeared _____, an officer of _____, known to me to be the person and official whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same as an act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this _____ day of _____, 20_____

_____
Notary Public

Form Revised July 2022

PERFORMANCE BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND § SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ (Hereinafter called the Principal[s]), as Principal(s), and _____ (Hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____day of _____ , 20___ , for the furnishing of materials and equipment to perform all labor and work necessary for the construction of Solomon Lane Paving Bond Project , specifically including in the scope of this work and bond, the additional maintenance guaranty provisions set forth in the contract conditions, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copies at length herein, as well as the Principal's primary obligation to perform according to plans and specifications.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform the work in accordance with the plans, specifications, instructions to bidder, general and special conditions and other contract documents, including any addendum thereto, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and surety do sign and seal this instrument, this _____ day of _____ , 20___.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: Attach Power of Attorney

PAYMENT BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND § SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ of the City of _____ of the County of _____ and State of Texas as Principal, and _____, as Surety, are held and firmly bound unto the City of Midland, Texas, as Obligee, in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and Surety bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____ day of _____, 20__, for the furnishing of materials, equipment to perform all labor and work necessary for Solomon Lane Paving Bond Project, hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, the condition of the obligation is that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said contract, then this obligation shall be null and void; otherwise, it is to remain in full force and effect.

Surety, for value received, stipulates and agrees that no change, extension of time alteration or addition to the terms of the contract, or to the work performed there under, or the plans, specifications of drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of

time, alteration or addition to the terms of the contract, assignment thereof, or to the work to be performed there under.

IN WITNESS WHEREOF the said Principal and Surety have signed and sealed this instrument, this _____ day of _____ , 20__ .

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: Attach Power of Attorney

CERTIFICATE OF PAYMENT

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

Solomon Lane Paving Bond Project

The undersigned states that all debts, bills, and expenses that were incurred by the undersigned, his agents, or subcontractors employed by him, for labor, wages, materials and other purposes furnished for the above project have been paid and satisfied in full.

The undersigned, as general contractor for the above described project agrees to indemnify, hold harmless and defend the City, its officers, agents, and employees, from and against all claims and suits for damages, expenses, including court costs and attorney fees, arising out of or resulting from the undersigned contractor, his agents or subcontractors employed by him for expenses, warranties for items furnished, or labor performed and for any party that has supplied materials in connection with the repair or construction of the above referenced premises.

The undersigned contractor agrees to waive any and all claims it may have against the City, associated with, resulting from or arising out of the work performed at the above premises.

Further, the undersigned states that all labor performed by the undersigned, his agents, and subcontractors employed by him, has been completed in the usual and customary workmanlike manner and all work performed is accompanied with the usual and appropriate warranties for such work or repair, absent any disclaimer previously approved by the City of Midland.

I, the undersigned, release and relinquish unto the City of Midland, and their assigns the above described lien upon the above referenced property and hereby certify that all debts, bills, and expenses incurred by the undersigned, his agents, or subcontractors employed by him in connection with work done at the above

premises have been fully paid, in exchange for payment in full to be made by the City of Midland for the performance on the above described premises.

WITNESS MY HAND on this _____ day of _____, 20_____.

_____
Signature

_____
Typed or Printed Name

_____
Title

_____
Name of Company

SUBSCRIBED AND SWORN to before me on the _____ day of _____, 20_____.

_____
Notary Public, State of Texas

_____
Typed or printed name

_____
My Commission expires:

Form Revised May 2022

City of Midland Specifications

PREPARATION OF RIGHT OF WAY

1. GENERAL

Includes the preparation of right-of-way for construction by clearing, grubbing, removing and disposing of all obstructions and objectionable material from the right-of-way and designated easements, which is not specifically provided for on the plans.

Obstructions and objectionable material refer to all objects or material that do not meet the quality of standards for the courses of pavement to be constructed or which protrude into the excavation for slopes.

Measurement and Payment - Measurement and payment will be at the units and prices for the applicable bid item in the proposal.

When no specific bid items are included in the bid proposal for work specified under this section this work shall be considered as incidental to other items of work and the cost shall be included in the bid for these items. No separate payment will be made.

2. CONSTRUCTION METHODS

Removal - Obstructions and objectionable material to be removed by blading, plowing, bulldozing, or other methods approved in writing by the Engineer. The use of explosives will not be permitted. Solid objects must be removed to a depth of at least one (1) foot below the finished slope or subgrade elevation. Hollow objects must be removed entirely.

Disposal - Material to be removed from the right-of-way becomes the property of the Contractor. If disposal areas are available, they will be indicated on the plans.

Preservation of Trees and Shrubs - Trees and shrubs to be preserved in the right of way are shown on the plans and must be protected from injury during construction.

Removal of Concrete - Cut concrete at the right-of-way line straight and vertical by sawing or other approved methods prior to the removal of concrete in the right-of-way.

EXCAVATION, EMBANKMENT AND PREPARATION OF SUBGRADE 1
1. GENERAL 2
2. CONSTRUCTION METHODS 2

EXCAVATION, EMBANKMENT AND PREPARATION OF SUBGRADE

1. GENERAL

Includes the excavation, embankment and preparation of subgrade determined by the lines, grades and sections shown on the plans and in accordance with the provisions of the specifications.

Excavation - Includes excavation to planned grade, disposal of the material, removal of unsuitable subgrade material and borrow material when required in the construction. All excavation to be classified as common.

Embankment - Consists of excavated or borrow materials placed and compacted in horizontal layers in accordance with the specifications.

Subgrade - The upper eight inches (8") of embankment or the upper eight inches (8") below the roadway excavation finished grade. The subgrade shall extend from six inches (6") back of curb to six inches (6") back of curb where curb and gutter is to be constructed.

Measurement and Payment - Measurement and payment to be at the units and prices for the applicable bid items in the proposal.

2. CONSTRUCTION METHODS

Excavation - Made at the location and to the lines and grades shown on the plans in areas previously prepared in accordance with provisions of Section 2A. Dispose of excess material not required in the embankment and material that is unsuitable for subgrade. Excavation tolerance to be plus or minus 1/10 foot from the plan grade.

The area between the curb and property line shall be excavated or filled, whichever is necessary, to curb height at back of curb and finished to a straight even surface to the property line. The minimum elevation at the property line shall be the elevation of the top of the curb. The maximum elevation at the property line shall be equal to a rise of 1/4 inch per foot from the back of the curb to the property line.

During the excavation of this project, it will be required that all parkways be excavated and shaped at the same time the roadway is excavated. Excess excavation will be disposed of at locations approved by the Engineer.

Embankment shall be constructed at the locations and to the lines and grades shown on the plans in areas previously prepared in accordance with Section 2A of these specifications. Top eight inches (8") of natural ground to be compacted

to embankment density requirements. Embankment shall be constructed from suitable material obtained from the excavation or borrow free of roots, rocks in excess of three inches (3"), debris and other objectionable material. Excavation deficiencies shall be supplemented from a borrow source approved by the Engineer. Embankment shall be constructed in uniform horizontal layers not to exceed eight inches (8") of loose depth and compact with suitable equipment to a minimum of ninety percent (90%) AASHTO T180. The materials shall be processed by aeration or watering to bring the material to the approximate optimum moisture. Dry layers will not be permitted. Soft spots that develop in the embankment shall be removed and replaced with suitable material. No payment will be made for removal of soft spots. Tolerance for embankment grading shall be one-half foot (1/2) plus or minus the plan grade.

Preparation of Subgrade - Eight inches (8") of the upper portion of the embankment or excavation shall be shaped and compacted to a minimum density of 95 percent (95%) AASHTO T180 and finished within a tolerance of one-half inch (1/2") in ten feet (10'). The finished subgrade shall be protected and maintained in a satisfactory condition until covered by succeeding construction.

Compaction Tests - Field density tests will be made by the Owner or by a laboratory selected by the Owner. The Contractor shall notify the Engineer when compaction has been achieved. The Contractor shall allow 24 hours for scheduling of test. Prior to the taking of subgrade density test, the entire subgrade will be tested by proof-rolling using a pneumatic roller weighing not less than 50,000 lbs. gross with tire pressure being not less than 110 psi. Any soft spots, pumping, or other evidence of weakness shall be remedied before density tests are made. Proof rolling shall be in the presence of the Engineer or his duly authorized representative.

The City will pay the cost of initial density tests made on the subgrade. If the subgrade fails to meet the density requirements on the first test, the contractor will be required to have subsequent density tests made by the commercial lab selected by owner. The cost of all subsequent density tests will be born by the contractor.

08/07

CONCRETE CURB AND GUTTER, SIDEWALKS AND DRIVEWAYS,

VALLEY GUTTERS, CENTER DRAINS AND RIP RAP

1. GENERAL

Includes the construction of concrete curb and gutter, sidewalks, driveways, valley gutters, center drains and rip rap in accordance with lines, grades and the sections shown on the plans and constructed in full compliance with provisions of the specifications.

A proven performance record by the Texas Highway Department shall be supplied by material producers for all materials supplied by them.

2. MATERIALS

Concrete - All concrete other than rip rap shall be Class "A" concrete in accordance with Texas Highway Department specifications Item No. 421. Concrete for rip rap shall be the class as shown on the plans and detail drawings. When no concrete class is shown the plans concrete for rip rap shall be Class "B" concrete.

Concrete batch designs shall be furnished for each project and shall include all classes of concrete proposed for use on the project.

Reinforcing Steel - Reinforcing steel shall be deformed bars or wire mesh fabric conforming to the requirements of "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" Item No. 440 and shall be of the sizes and grades as shown on the plans.

The contractor, at his option, may use fiber reinforcing in lieu of the wire mesh for all concrete slab on grade. When fiber reinforcing is used, it shall be "Fiber Mesh" or "Caprolan RC" or approved equal. The material and rate of application shall be approved by the Engineer prior to its use.

Expansion Joints - Bituminous pre-molded joint filler shall be composed of top grade fiber, treated by special impregnation system with water repellent bituminous materials. It shall be a non-extruding type, resilient, expanding on release of compression, preventing open joint crevices. The pre-molded joint filler shall be of such character, that it will not be deformed by handling during hot weather, nor shall it become brittle in cold weather. It shall be free from visible external defects such as holes, ragged or untrue edges, breaks, cracks or tears. It may be covered on both sides with paper to facilitate handling.

The joint filler shall be accurately cut to the dimensions and shapes required. It shall be of the thickness required by the plans, or as specified elsewhere.

3. CONSTRUCTION METHODS

GENERAL

No concrete shall be placed when, in the Engineers opinion, weather or other conditions would be detrimental to the structure placed. No concrete shall be placed on grade when the ground temperature is 35^{o} F or lower. Concrete may be placed when the ground temperature is rising from 35^{o} F. Concrete placed in cold weather shall be protected from freezing for 72 hours after being placed.

CURB AND GUTTER

EXCAVATION AND SUBGRADE - Excavation for curb, gutter, and combined curb and gutter shall be done with the subgrade excavation for the street. Street subgrade shall extend from six inches (6") back of curb to (6") back of curb and shall be compacted for a full width to a minimum of 95% AASHTO T180-61. Where subgrade is more than three inches (3") below bottom of curb, fill shall be compacted caliche base constructed from six inches (6") back of curb to six inches (6") back of curb as specified for base course.

Whenever subgrade or base is dry or dusty, it shall be thoroughly moistened, not made muddy, before the concrete is placed.

Forms - Forms shall be of steel, of a type to be approved by the Engineer, except that curves may be formed with wood sections built up or laminated, upon prior approval by the Engineer.

The forms shall be attached securely to stakes, shall be set true to line and grade, and braced sufficiently to remain true during the placing and tamping of the concrete. Forms shall be thoroughly cleaned and oiled before each use.

Curves - All changes in direction of the curbs shall be by means of true circular curves of the radii as shown on the plans.

Expansion Joints - Expansion joints shall be placed between curb and gutter sections at the tangent points of all curves, at each side of the inlet boxes, drives, alleyways, and at intervals of not more than forty feet (40') in straight runs. The expansion material shall be pre-molded three-fourths inch (3/4") in thickness, and shall conform to the requirements of expansion material as specified herein. It shall be cut to the full size and shape or the cross section of the curb and gutter, less one-half inch (1/2") from the finished surface thereof. The edges of sections against the joint shall be finished with an edging tool and the joint raked clean of concrete.

Finishing - There shall be provided on the job a metal screed or mule designed to give proper shape to the curb and gutter. It shall be bent to the exact shape of the finished curb and gutter and the forward edge turned up slightly to prevent disturbing the mortar. It shall be designed to ride on the forms and when properly manipulated shall leave the curb and gutter in its proper shaped condition. An "S" trowel shall be used to finish the surface and minor imperfections shall be corrected with a mason's trowel. Care shall be taken to finish

the gutter flow line to a true, uniform grade. All edges shall be finished with an edging tool, and joints marked with a jointer. Joint marks shall coincide with actual joints and shall be straight and true.

Curing - The completed curb and gutter, shall be cured in accordance with the requirements of the item "Membrane Curing", Texas Highway Department Item 531.

DRIVEWAYS AND ALLEY RETURNS

Driveways and alley returns shall be constructed of Class "A" concrete to the lines and grades as shown on the plans and detail sheets. All driveways and alley returns shall be reinforced as shown on the detail drawings.

Excavation and Subgrade - Excavation shall be accomplished in the same manner as for streets and curbs. The subgrade for all driveways and alley returns shall be compacted to 95% modified proctor density for 8 inches depth.

Driveways for single family residences and property used for two family residential purposes (duplexes) may be placed on the compacted subgrade. All other driveways shall be considered as commercial driveways and shall be constructed on 6 inches compacted flexible base.

Flexible Base - Commercial driveways and alley returns shall be constructed on 6 inches of flexible base conforming to Section 2-C- Flexible Base, Caliche.

Forms - Forms shall be constructed of steel or, when approved by the engineer, wood conforming to the requirements for curb and gutter forms.

Expansion Joints - Expansion joints shall be placed at the ends of abutting curb and gutter at the end of radii for all driveways and alley returns. In addition, expansion joints shall be placed at the ends of abutting sidewalk sections and at any point where the driveway or alley return abuts another concrete structure. Expansion joint material shall be pre-molded three fourths inch (3/4") in thickness, cut to the shape and dimensions required and shall extend the full depth of the concrete.

Finishing - Shaping and finishing of driveways and alley returns shall be accomplished by using a screed to shape the driveway or alley return to the lines and grade required. Finishing shall be accomplished by use of wooden floats and stiff bristled brushes or brooms. The last finish shall be by brushing or brooming in
A direction transverse to the direction of traffic.

During the entire finishing process care shall be taken to maintain the true gutter invert in line with the street curb and gutter.

Curing - Finished driveways and alley returns shall be cured in accordance with the requirements "membrane curing" "Texas Department of Highways and Public Transportation, 1982 Standard Specifications for Highways, Streets and Bridges", Item Number 531.

CONCRETE VALLEY GUTTERS, CENTER DRAINS AND DRAINWAYS

Concrete slab type street drainage structures with or without curbs, shall be constructed of Class "A" concrete to the lines and grades as shown on the plans and detail sheets or as may be established in the field by the engineer.

Subgrade excavation preparation and compaction and flexible base shall be the same as specified for street construction. All drainage structures within the roadway shall be constructed on a flexible caliche base so that the thickness of the concrete slab plus base is equal to the thickness of the hot mix asphaltic concrete surface plus base.

Forms - Forms shall be as specified for curb and gutter.

Reinforcing - All slab type drainage structures shall be reinforced as shown on the plans and detail drawings. Care shall be taken to maintain all reinforcing in good condition and at its proper location within the slab.

Expansion Joints - Expansion joint material shall be as specified for curb and gutter and for driveways and alley returns.

Expansion joints for valley gutter shall be placed at the ends of radii and at the juncture between the fillet and the cross valley as shown on the detail sheet.

For center drains, expansion joints shall be placed at the ends of widened or transition sections and at each end of a section containing a manhole or other structure and at intervals of sixty feet (60') measured along the center line of the drain.

Additional expansion joints shall be placed where drainage slabs abut backs of curbs, sidewalks and at contact points with other concrete structures.

Contraction Joints - Contraction joints shall be spaced at 15' intervals along the center line of center drains. These contraction joints shall be saw cut 3/8" wide minimum and 1/4 the depth of the slab using an approved concrete saw.

Saw cut contraction joints shall be made after the concrete has set sufficiently to prevent excessive raveling during sawing and shall be completed before the concrete is 48 hours old.

Finishing - Finishing shall be the same as for alley returns and driveways with the last finishing operation for structures subject to vehicular traffic being by broom or stiff brush in a direction transverse to the direction of traffic.

Curing - Curing shall be the same as for curb and gutter and driveways and alley returns.

SIDEWALKS

Sidewalks shall be constructed of Class A" concrete to the lines and grades as shown on the plans and detail drawings or as may be established in the field by the engineer. Sidewalks shall be constructed parallel to the back of the curb and on a grade parallel to

the top of curb grade. The minimum thickness for any sidewalk is 4 inches. The minimum width of any sidewalk is 4 feet.

Excavation and Subgrade - Excavation for sidewalk shall be made with street excavation where applicable. Care shall be exercised in excavating for sidewalks. Any over excavation or any fill required for sidewalk must be brought to grade in lifts not to exceed two inches (2") and thoroughly tamped. Subgrade for sidewalks shall be compacted to at least the density of the adjacent soil or to 85% modified proctor whichever is greater.

When a sidewalk is to be constructed on an embankment the fill must extend at least 3 feet beyond the edge of the sidewalk.

If the subgrade is dry or dusty it must be thoroughly moistened but not made muddy before concrete is placed.

Forms - Forms for sidewalks may be either steel or wood. Forms must be in good shape and true to line and grade. If nominal 2" x 4" lumber is used the subgrade must be finished one half inch (1/2") below the bottom of the form to provide the required 4 inch thickness.

Expansion Joints - Expansion joint material shall be pre-molded conforming to these specifications and shall be one half inch (1/2") thick. The expansion joint shall extend the full depth of the sidewalk.

Expansion joints shall be placed at points where the sidewalk contacts the back of curb, at all junctures between sidewalks all directions, and at all points where the sidewalk abuts a driveway, alley return or other concrete structure including fence foundations.

Transverse expansion joints shall be constructed in the sidewalk at intervals not exceeding twenty eight feet (28') as measured along the centerline of the walk except for sidewalks that are constructed wider than four feet (4') in which case expansion joints may be placed at intervals that are multiples of the width but not exceeding thirty feet (30').

Contraction Joints - Contraction joints consisting of trowel cuts one and one half inches (1-1/2") deep shall be spaced at four foot (4') intervals along the sidewalk. Contraction joints shall be edged using an edging tool with a 1/4 inch or 3/8 inch radius.

For sidewalks wider than four feet (4') contraction joints may be placed at intervals equal to the width of the walk up to but not exceeding ten feet (10').

Finishing - Sidewalks shall be "struck off" with a screed to provide an even surface and float finished using a wooden float.

The final finish on the sidewalk shall be accomplished by brooming or brushing using a stiff bristled brush or broom with the final strokes being in the transverse direction.

Curing - Curing shall be as specified for curb and gutter and driveways and alley returns.

CONCRETE RIP RAP

Concrete rip rap shall be constructed of concrete of the class and to the line and grades as shown on the plans.

Excavation and Subgrade - Care shall be taken not to over excavate for rip rap. The subgrade for rip rap shall be compacted to at least the density of the adjacent undisturbed soil or 85% modified proctor whichever is higher.

Forms - Forms, where required, may be either steel or wood. Forms must be in good condition and true to line and grade.

Expansion Joints - Expansion joints, where required, will meet the requirements of expansion joints materials as specified herein and will be placed as shown on the plans or directed by the engineer.

Finishing - Finishing shall be by screed and wooden float to produce true uniform surface.

Curing - Curing shall be as specified for other concrete herein.

Slope Paving - Slope paving may be required behind the curb or behind sidewalks where street paving requires deeper cuts in developed areas. Slope paving shall be constructed of Class "A" concrete and shall be constructed to the lines and grades as shown on the plans or as established in the field. Slope pavement shall be four inches (4") thick and shall be constructed in accord with the specifications for sidewalks.

When no slope grade is given on the plans the slope gradient shall be l:l.

Unless listed separately on the bid proposal, slope pavement shall be measured and paid for as sidewalk.

4. BACKFILL AND CLEANUP

GENERAL

Backfill and clean up are an integral part of the various items covered by this specification and must be completed for each item before that item will be considered for payment.

CONCRETE STRUCTURES WITHIN THE PAVED AREA OF STREETS

Backfill and clean up for concrete structures within the paved areas of streets, alleys, etc. shall receive special attention to assure the integrity of the street pavement.

Structures constructed in previously paved areas shall have sufficient surface removed along with base and subgrade where necessary to set full face forms for the concrete. As soon as the forms are removed all loose material shall be removed from the form trench and the trench filled to the base level with Portland cement stabilized backfill material

consisting of two (2) sacks Portland cement to one (l) cubic yard of caliche base material or one (l) cubic yard "blow sand". When the cement stabilized backfill has cured the pavement edge shall be saw cut to provide true and straight lines and the pavement restored to its original or revised grade using Hot mix asphaltic concrete conforming to the requirements of Section 2-F of these specifications.

For structures constructed on previously prepared subgrade or base course, clean up and backfill shall be considered complete when the subgrade or base course has been made ready to receive the next course.

When a structure is constructed on a finished base course and it is necessary to remove base material to set forms, backfill and cleanup shall be as described for previously paved areas and shall be considered complete when the base course is made ready to receive the surface course or courses.

BACKFILL BEHIND CURBS AND ALONG SIDEWALKS

Backfill behind curbs and along sidewalks that is to be grassed shall be made using good top soil. Top soil shall be free of caliche, rocks, clods, lumps, debris and other objectionable material. This backfill shall be compacted to at least the density of undisturbed adjacent soil but not less than 85% modified proctor.

Backfill behind curbs and along sidewalks that is to receive paving shall be constructed to conform to the base and subgrade of the adjacent paving and shall be compacted to 95% modified proctor. Or the contractor may elect to backfill to the top of the base with two (2) sack cement stabilized backfill.

In undeveloped areas and in areas where no sidewalks exist the contractor shall slope from the back of the curb to a maximum height of 1/4 inch per foot rise from the top of the curb to the property line on a straight line grade. The minimum elevation at the property lines shall be top of curb elevation.

In deeper cut areas slope paving may be required. When slope paving is required it shall be constructed to the lines and grades shown on the plans. Backfill and shaping beyond the slope paving shall be in accord with the applicable portions of this specification.

08/07

CONCRETE CURB AND GUTTER, SIDEWALKS AND DRIVEWAYS **1**

VALLEY GUTTERS, CENTER DRAINS AND RIP RAP **1**

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Updated 3/06

CONCRETE STRUCTURES

1. GENERAL

This specification covers concrete structures including but not limited to junction boxes, culverts, head walls, cast in place manholes, valve vaults, meter vaults and retaining walls.

2. MATERIALS

CONCRETE

Concrete for cast in place manholes, junction boxes, storm sewer inlet boxes, valve vaults and direct traffic culvert and bridge decks shall be a modified class "C" concrete using a minimum of 6 sacks cement per cubic yard with a maximum water content of 5 gallons per sack of cement and producing a concrete with 4000 psi 28 day compressive strength.

Concrete for other structures shall be class "A" as specified in "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" item number 421. Concrete for riprap shall be class "B".

Reinforcing steel shall conform to the requirements of item number 440 or "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" and shall be of the sizes and grades as shown on the plans.

3. CONSTRUCTION

Construction of concrete structures shall be in accordance with the provisions of item 420 "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges".

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FLEXIBLE BASE, CALICHE

1. GENERAL

This item consists of the construction of a caliche flexible base course to the lines, grades and thickness shown on the plans and in accordance with the provisions of the specifications.

Qualification of Material Source - There will be no designated material sources, but the source proposed by the Contractor must be approved by the Engineer. The contractor shall furnish evidence of capability to crush and screen the material with suitable equipment.

Measurement and Payment - Measurement and payment to be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Material from the approved source shall meet the following requirements when tested in accordance with the referenced testing standards:

Gradation - Tested by ASTM C 136-67 to meet the following gradation limits:

Sieve Size	Percent Passing
1-3/4"	100.0
7/8"	65-90
3/8"	50-70
No. 4	30-60
No. 40	15-35

Liquid Limit and Plasticity Index **-** Tested by ASTM D423-66 and D 424-59.

Liquid Limit - 30.0 Maximum
Plasticity Index - 10.0 Maximum
Triaxial Classification - Tested by Texas Highway Department Method TEX 117-E, Part II - minimum class 3.0.

Source Quality Control - The contractor shall exercise caution in the operation of the material source to prevent the inclusion of inferior materials.

3. CONSTRUCTION

A. The subgrade shall be finished true to the lines and grades as shown on the plans or as established by the Engineer and finished within specified tolerances and properly maintained to prevent drying and/or loosening of the surface.

No base material may be dumped on any subgrade until it has been tested and approved by the Engineer.

B. Flexible caliche base material shall be placed in uniform courses and processed to provide a uniformly mixed base course of the proper moisture content for compaction. The processing and compaction procedure used shall provide a uniform base course compacted to ninety-five percent (95%) modified proctor density (YACHT T180) minimum. The minimum thickness of any one compacted course shall be three inches (3"). The maximum thickness of any one compacted course shall be eight inches (8").

Any soft or segregated spots that appear in the base shall be removed, replaced or reprocessed and recompacted prior to final finishing of the base. The finished base shall conform to the lines and grades as shown on the plans or established by the Engineer. Finished tolerances shall not exceed one half inch (1/2") in ten feet (10').

The finished base shall be primed as soon after finishing as practical and shall be protected until the hot mix asphaltic concrete surface is applied. In no case will prime be applied until the finished base has been approved by the Engineer.

4. TESTING

A. All test for approval of the source shall be performed by a commercial lab selected by the owner and shall be paid for by the contractor.

B. Gradation and soil constants tests (ASTM C-136, D423 and D424) and THD Triaxial Test (THD TEX117-E Part II) will be performed for source approval. Should the appearance, workability or other visual checks indicate a possible change in the material being furnished, the Engineer may require the contractor to retest the material for source approval.

C. Field quality control test will consist of the finish tolerance test and density test.

The finish tolerance test will be performed by the contractor at his expense using a 10' rolling straight edge. This test shall be performed at the direction of the Engineer or his representative. When required, the test shall consist of checking one path in each lane with the rolling straight edge.

Density test will be made by the City or a commercial laboratory chosen by the City using Troxler 3411-B nuclear density gauges or approved equal at the minimum rate of one test for each 1000 square yards of base. In no case shall less than three tests be run on any one area processed as a unit. The City will bear the cost of the first test or set of tests only. If the base fails the first test the contractor, at his own expense, will be required to have all subsequent tests performed by the commercial laboratory chosen by the city.

8/07

BITUMINOUS PRIME

1. GENERAL

This item consists of the application of a bituminous prime coat to the finished caliche base in accordance with the provisions of the Specifications.

Qualification of Material Source - Material shall be supplied by a producer with a proven performance record of acceptance by the Texas Highway Department.

Measurement and Payment - Measurement and payment will be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Cut-back asphalt grade MC-30, Texas Highway Department Item 300.

Source Quality Control - Certificates of compliance to be furnished by the producer to the Engineer.

3. CONSTRUCTION METHODS

Condition of Base - The surface of the base shall be tightly compacted to the line and grade shown on the plans and within the tolerances of the specifications. The surface shall be clean and the base shall contain sufficient moisture to assure the proper penetration of the prime.

The prime shall be applied with an approved distributor to the surface of the base at a rate of between 0.15 and 0.40 gallon per square yard. The application rate shall be varied to meet field conditions and to obtain uniform coverage, and adequate penetration. Properly applied prime coat should penetrate from 3/8" to 1/2" into the base and should cure in approximately 72 hours with ambient temperatures at or near 70 degrees F. The prime shall be applied at a temperature within the range of temperatures recommended in Item 300 of Texas Highway Department Standard Specifications. The temperature shall be varied within this range to provide a viscosity that will assure even spreading and penetration of the base. Air Temperatures at the time of application shall be above 50'F.

BITUMINOUS TACK

1. GENERAL

This item consists of the application of a bituminous tack coat to the primed base or existing asphaltic concrete or Portland cement concrete pavement in accordance with the provisions of the specification.

Qualification of Material Source - Material shall be supplied by producer with a proven performance record of acceptance by the Texas Highway Department.

Measurement and Payment - Measurement and payment will be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Cut-back asphalt grade RC-250, Texas Highway Department Item 300.

3. CONSTRUCTION METHODS

Conditions of Surface - Prior to application of tack to the base course the prime must be completely penetrated into the base and the surface cleaned of foreign objects.

The tack shall be applied with an approved distributor at a rate of between 0.05 and 0.10 gallons per square yard. The temperature of application shall be within the range recommended by the Texas Highway Department in Item 300. The surface temperature to which tack is being applied shall be above 50 degrees F. at the time of application.

When the asphaltic concrete surface is being placed on primed caliche base, use of the tack coat may be waived by the Engineer if the contractor can show that adequate adhesion of the surface being placed to the base course is achieved without it.

Tack coat shall be placed on all asphaltic concrete or portland cement concrete surfaces on which an additional course of asphaltic concrete surfacing is to be placed. The tack coat shall be rolled with a pneumatic roller to assure even distribution over the entire surface and to achieve proper penetration into and adhesion to the surface being overlayed.

HOT MIX ASPHALTIC CONCRETE

I. GENERAL

Includes the construction of the hot mix asphaltic concrete surface in accordance with lines, grades and the sections shown on the plans and with the provisions of the specifications.

Qualification of Material Sources - Producers of oil asphaltic concrete mixture to have a proven record of acceptance by the Texas Highway Department.

Measurement and Payment - Measurement and payment to be at the units and price for the applicable bid item in the proposal.

2. MATERIALS

Oil Asphalt - Oil asphalt grade AC-l0 or AC-20, Texas Highway Department Item 300. When no asphalt grade is shown on the plans, and unless directed otherwise by the Engineer, asphalt for this project shall be grade AC-10.

Coarse Aggregate - Crushed stone or crushed gravel with a minimum of 75 percent of the aggregates having two or more crushed faces. Additional requirements:

(a) Los Angeles Abrasion: ASTM C l3l, Wear not to exceed 40.

(b) Decantation: Maximum 2.0 percent by weight

Fine Aggregates - Natural sand and screenings crushed from the same or similar material meeting the requirements of the course aggregates. Additional requirements.

(a) Plasticity Index: Maximum of 6.

(b) Sand Equivalents: Minimum of 50 for each individual fine aggregate.

Paving Mixtures - The paving mixture(s) shall be as shown on the plans and details. If no mixtures are shown on the plans surface or wearing courses up to l-3/4 inches thick shall be Type D, base courses up to 2 inches thick shall be Type C and base courses over 2 inches thick shall be Type B or Type A.

(a) Gradation: The master gradations for the paving mixtures are:

TYPE "A" (Coarse Graded Base Course):	Percent Aggregate by weight or volume
Passing 2" sieve	100
Passing l-3/4" sieve	95 to 100
Passing l-3/4" sieve, retained on 7/8" sieve	16 to 42
Passing 7/8" sieve, retained on 3/8" sieve	16 to 42
Passing 3/8" sieve, retained on No. 4 sieve	10 to 26
Passing No. 4 sieve, retained on No. l0 sieve	5 to 21
Total retained on No. l0 sieve	68 to 84
Passing No. l0 sieve, retained on No. 40 sieve	5 to 21
Passing No. 40 sieve, retained on No. 80 sieve	3 to 16
Passing No. 80 sieve, retained on No. 200 sieve	2 to 16
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight.

TYPE "B" (Fine graded Base or Leveling-up course)	Percent Aggregate by Weight or Volume
Passing l" sieve	100
Passing 78" sieve	95 to 100
Passing 7/8" sieve, retained on 3/8" sieve	21 to 53
Passing 3/8" sieve, retained on No. 4 sieve	11 to 42
Passing No. 4 sieve, retained on No. l0 sieve	5 to 26
Total retained on No. l0 sieve	58 to 74
Passing No. l0 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 21
Passing No. 80 sieve, retained on No. 200 sieve	3 to 21
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight.

Type "C" (Coarse Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing 7/8" sieve	100
Passing 5/8" sieve	95 to 100
Passing 5/8" sieve, retained on 3/8" sieve	16 to 42
Passing No. 4 sieve, retained on No. l0 sieve	11 to 37
Total retained on No. l0 sieve	54 to 74
Passing No. l0 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 27
Passing No. 80 sieve, retained on No. 200 Sieve	3 to 27
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight.

TYPE "D" (Fine Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing l/2" sieve	100
Passing 3/8" sieve	85 to 100
Passing 3/8" sieve, retained on 4" sieve	21 to 53
Passing No. 4 sieve, retained on No. l0 sieve	54 to 74
Total retained on No. l0 sieve	54 to 74
Passing No. l0 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 27
Passing No. 80 sieve, retained on No. 200 sieve	3 to 27
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 4 to 8 percent of the mixture by weight.

TYPE "F" (Fine Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing 3/8" sieve	100
Passing No. 4 sieve	95 to 100
Passing No. 4 sieve, retained on No. l0 sieve	58 to 73
Passing No. l0 sieve, retained on No. 40 sieve	6 to 26
Passing No. 40 sieve, retained on No. 80 sieve	3 to 13
Passing No. 80 sieve, retained on No. 200 sieve	2 to 11
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 6.5 percent of the mixture by weight.

(b) Tolerances: Deviations from job mix formula limited to:

(l) Sizes larger than the l0 sieve- Plus or Minus 4 percent.

(2) No. l0 sieve and smaller - Plus or Minus 3 percent.

(3) The deviation from the job mix formula shall be further limited in that the total deviation from the job mix formula between any two adjacent aggregate grades shall not exceed the allowable deviation for either one.

(4) Asphalt - Plus or Minus 0.3 percent.

(c) Density - The mixture shall be designed to produce an acceptable mixture within tolerance, at or near optimum density. The mixture molded in the laboratory should have the following percent of maximum theoretical density:

Minimum	Maximum	Optimum
96	98	97

(d) Stability: Minimum of 35 Hveem

Source Quality Control - Paving mixture and plant tests to be performed by laboratory selected and paid by the Owner, except as noted.

Job Mix Formula - The contractor shall submit a job mix formula, prepared by laboratory chosen by the owner, at least l0 days in advance of laying operations to allow time for review by the engineer. Substitution of one or more materials will require a new job mix formula and must be approved by the engineer.

The design of job mix formula whether for original submittal or revisions shall be paid for by the contractor.

Plant Tests - Check of raw material uniformity, quality and flow, hot bin gradations, temperature of mixture, mixture tests for density, stability and percent asphalt and other necessary tests to be performed bythe laboratory selected by the owner for each day's production.

Oil Asphalt - Producer to furnish certificates of compliance to the Engineer.

3. CONSTRUCTION METHODS

A. GENERAL

Condition of Base - The surface of the base shall be tight and free of debris. The prime coat shall be uniformly distributed, well penetrated and completely cured prior to application of the tack coat. If the mixture will adhere to the surface of the base without the application of a tack coat, the tack coat can be eliminated. If the surface of the base is one half (l/2") inch or more lower than the proposed bottom of the asphaltic concrete it shall be corrected by placing and compacting a level up course of the asphaltic concrete before the mat is placed on it.

Stockpiling, Storage, Batching and Mixing - Shall meet the requirements of Item 340, "Texas Highway Department l982 Standard Specifications for Road and Bridge Construction.

Weather Limitations - Shall be the requirements of Item 340,"Texas Highway Department l982 Standard Specifications for Road and Bridge Construction." With the added provision that no asphaltic concrete shall be placed when the surface on which the mat is to be placed is below 50 degrees F.

Thickness - Shall be as shown on plans. Unless shown otherwise on the plans, the maximum compacted thickness of any one course of asphaltic concrete shall be two and one-half (2-l/2) times the maximum aggregate size of the mixture being placed. The minimum shall be one (l) inch or one and one fourth (1-1/4) times the maximum particle size which ever is greater.

B. PLACING

Placing of Asphaltic Concrete shall be accomplished using an approved self propelled spreading and finishing machine with a heated vibrating screed capable of producing a surface that will meet the requirements of the typical cross section and the surface test, and when the mixture is dumped directly into the finishing machine shall have adequate power to propel the delivery vehicles in a satisfactory manner. The finishing machine shall be equipped with a flexible spring and/or hydraulic type hitch sufficient in design and capacity to maintain contact between the rear wheels of the hauling equipment and the pusher rollers of the finishing machine while the mixture is being unloaded.

The use of any vehicle which requires dumping directly into the finishing machine and which the finishing machine cannot push or propel in such a manner as to obtain the desired lines and grades without resorting to hand finishing will not be allowed. Vehicles dumping directly or indirectly into the finishing machine shall be so designed and equipped that unloading into the finishing machine can be mechanically and/or automatically operated in such a manner that overloading the finishing machine being used cannot occur and the required lines and grades shall be obtained without resorting to hand finishing.

Automatic screed controls will be required and shall meet the requirements item, 528 "automatic screed controls for asphaltic concrete spreading and finishing machines "Texas Department of Highways and Public Transportation 1982 Specifications for Construction of Highways, Streets and Bridges".

The screed shall be ski controlled using a ski of not less than l8' in length. Curb shoe control will not be allowed.

The spreading and finishing machine shall be maintained in good working order and operated by competent trained personnel.

The Engineer may require the contractor to place a test strip to prove the capability of the machine and the competency of the operating personnel to produce a satisfactory finished surface.

In dips and on curved surfaces where the ski control cannot be used, the surface will be controlled using a l0' straight edge.

Fillet areas, turn outs and other areas not accessible to the spreading machine may be hand laid provided a satisfactory surface is produced.

C. COMPACTION AND FINISHING

Compaction Requirements - The asphaltic concrete surface shall be compacted so that the compacted mixture will contain not more than seven percent (7%) nor less than three percent (3%) air voids.

The surface of the pavement, after compaction, shall be smooth and true to the established line, grade and cross section, and when tested with a l0 foot rolling straightedge, except as provided herein, the maximum deviation shall not exceed l/8 inch in l0 feet, and any surface not meeting this requirement shall be corrected as directed by the engineer.

Raking and Leveling - Minor leveling may be accomplished using asphalt rakes prior to compacting the surface. The surface shall be leveled by loosening the surface of the asphaltic concrete using an asphalt rake then adding or removing material and smoothing the surface. Any large aggregate worked to the surface in this process shall be removed before compaction. The large aggregate shall not be spread over the new asphaltic concrete surface.

Edges and joints with compacted asphalt or concrete gutters shall be carefully squared and excess material removed before compaction. Care shall be taken to see that NO excess material laps over onto the surface of existing asphaltic concrete paving or concrete gutters. Large aggregate worked to the surface in this process shall be removed. It shall not be spread over the new asphaltic concrete surface.

Rolling - In general rolling shall conform to the requirements of item 340 of the Texas Department of Highways and Transportation 1982 Specifications for Construction of Highways, Streets an Bridges except as modified herein.

It shall be the responsibility of the contractor to have rolling equipment available on the job to properly compact the paving mixture in place as required without delay to the lay down operation. Rollers provided shall meet the qualifications for their type as follows:

PNEUMATIC TIRE ROLLERS: The rollers shall be acceptable medium pneumatic tire rollers conforming to the requirements of the item, "Rolling (pneumatic tire)", Type B, unless otherwise specified on plans.

TWO AXLE TANDEM ROLLER: This roller shall be an acceptable power driven tandem roller weighing not less than 8 tons.

THREE WHEEL ROLLER: This roller shall be an acceptable power driven three wheel roller weighing not less than l0 tons.

THREE AXLE TANDEM ROLLER: This roller shall be an acceptable power driven three axle roller weighing not less than l0 tons.

Vibrating rollers will not be used without prior written approval of the engineer. Written approval will be granted only upon demonstration by the contractor that the roller and operator can produce a satisfactory surface within the tolerances of these specifications. Only the operator or operators thus approved will be allowed to operate the vibrating roller on this project.

Areas not accessible to standard rollers shall be compacted using trench rollers, impact tampers, hand tamps or other approved means that will produce the density and surface required.

JOINTS- Shall be carefully rolled to provide compaction of the asphalt against the existing surface or face of the concrete gutter. Joints between concrete gutters and Hot Mix Asphaltic Concrete shall be placed so that the HMAC will be approximately l/2 inch higher than the concrete when compaction is completed. At transverse joints such as valley gutters and fillet areas where finishing asphalt paving 1/2 inch above the edge of concrete will adversely affect ride quality the asphalt shall be finished 1/4 inch above the edge of the concrete.

Transverse joints shall be rolled in the transverse direction with the first pass extending approximately six (6") inches onto the new asphalt each additional pass shall extend approximately twelve (12") inches further onto the new asphalt until the full width of the roller is on the new asphalt. Longitudinal rolling may begin then.

All transverse joints shall be checked with a l0" straight edge while the material is

still hot enough to roll. Any corrections shall be made by loosening the material using an asphalt rake and adding or removing material and recompacting the surface. The surface shall be rechecked and when the joint is acceptable the asphalt spreading machine may proceed with the pass.

Final or finish rolling shall be accomplished using a two axle tandem roller to remove roller marks. This rolling shall be accomplished after the surface has cooled sufficient to minimize further marking but before it is too cool to respond to rolling.

STRAIGHTEDGES AND TEMPLATES - The contractor shall provide acceptable l0 foot straightedge for surface testing. Satisfactory templates shall be provided as required by the Engineer.

4. FIELD QUALITY CONTROL

Test Lots - Field Quality Control Tests shall be made by lot with a lot being the amount of contiguous surface laid in one day. No lot shall exceed l0,000 S.Y. If a days laying exceeds l0,000 S.Y., that days laying shall be divided into two approximately equal lots. The same lot divisions shall be used for all Quality Control Tests. Each separate block or combination of contingeous (blocks) of paving shall be considered as a separate lot even though they may be placed in a single day and do not comprise l0,000 S.Y. of surface.

Surface Tests - Surface tolerance tests will be performed in both longitudinal and transverse directions. The test for longitudinal surface tolerance will be performed with a ten-foot rolling straightedge furnished by the contractor, and calibrated and used in accordance with the manufacturer's recommendation or other approved method.

The maximum allowable deviation in surface shall be 1/8 inch in 10 feet. Tests for longitudinal surface tolerance will be performed by the contractor, accompanied by the engineer within 24 hours of the completion of a lot. One path in each lane for the length of the entire lot will be tested. The location of the test path (Distance from centerline or pavement edge) will be determined by the engineer through the use of random numbers. Any deviations in the surface finish of a roadway wearing course which exceeds l/4 inch must be corrected. After corrections have been made, the entire lot must meet the l/8 inch surface tolerance.

Thin course "scab on" patching will NOT be permitted. Corrections may be made by planning, milling and patching or by removing and replacing affected surface area.

When milling and patching is used to correct surface defects the minimum depth of removal shall be l".

For milling and patching or surface removal the area removed or milled shall be sufficiently large to avoid the appearance of patching.

When planning is used to correct defects the thickness of the remaining paving shall meet the thickness requirements as shown on the plans.

Surface tolerance test will be performed on the last or wearing course only.

Asphaltic concrete pavement constructed under these specifications that does not meet the surface tolerance requirements and is allowed to remain in place will be paid for at a reduced rate determined by multiplying the price bid for the wearing surface course by a surface tolerance quality factor. This rate shall apply to the entire lot.

Lower courses will not be affected by this quality factor but will be paid for at the price bid or such price as it may be affected by other quality factors.

The surface tolerance quality factor will be determined according to the following schedule:

Linear % of pavement exceeding 1/8 inch surface tolerance	Surface tolerance quality factor
0.0 to 1.0	1.0
1.1 to 1.5	0.9
1.6 to 2.5	0.8
over 2.5	0.5

Roadway surface requirements will not be applied for paved drives, aprons, turnouts, and other irregular sections, however, asphaltic concrete shall be placed in such a manner as to provide a neat and uniform appearance and shall be compacted by methods satisfactory to the engineer.

The contractor may request permission to reconstruct a portion of the pavement when, in his opinion, the surface tolerance quality factor can be improved. Upon approval of the engineer, the contractor shall take sufficient tests to isolate the portion or portions of pavement to be pre- constructed and remove and reconstruct the pavement. All costs in connection with this reconstruction are to be born by the contractor. The minimum width of this reconstruction shall be l/2 the street width unless approved otherwise in writing by the engineer. The portions reconstructed shall be re-tested and the surface tolerance quality factor recomputed using the new information along with the test from the area within the portion of the lot not reconstructed.

When other quality factor reductions are provided for on the plans or in the specifications the effect shall be cumulative ie: QFl x QF2 x QF3 x ....x QFn x unit price.

No payment will be made for pavement with a combined quality factor of less than 0.5.

Thickness Test - Thickness test will be made by the engineer on each course of asphaltic concrete laid. Test specimens shall be made by a commercial laboratory selected by the owner. Test specimens shall be cores having a minimum nominal diameter of 6". These cores shall be made in the presence of the inspector at locations designated by the inspector using an approved power operated coring machine.

For thickness and compaction test, each lot shall be divided into approximately equal sublots corresponding in width to each pass of the lay down machine and containing up to but not exceeding 2,000 square yards each. If a lot contains less than 2,000 square yards the engineer may, at his option, divide the lot into two equal sublots, or, if the contractor has a record of satisfactory workmanship, the engineer may waive tests on said lots.

The engineer will locate one test spot for each l,000 S.Y. and/or fraction thereof in each sub-lot using random numbers. If a spot thus located falls within one foot of a longitudinal joint or lip of gutter or within two feet of an unsupported edge or within l5 feet of the beginning or ending edge of a pass, the engineer will relocate the spot using random numbers. The commercial laboratory chosen by the owner will remove the test specimen from each designated spot, mark the specimen and the adjacent pavement for future reference and perform the required tests. Test specimens shall be removed with special caliper type tongs having circular jaws of the diameter of the specimen being removed. These jaws shall grip at least 1/2 of the circumference of the specimen. Screw drivers or other type of prying instruments shall not be used to remove the specimens.

The thickness of a specimen shall be determined by averaging four (4) measurements made at ninety degree (90) intervals around the specimen. Any thickness less than design thickness shall be considered as deficient.

For hot mix asphaltic concrete pavement less than 2 inches thick the maximum allowable deficiency in any one test specimen is l/8 inch provided that no more than twenty five percent (25%) of the specimens tested show a deficiency. For pavement in excess of 2 inches in thickness the maximum allowable deficiency in any one specimen shall be l/8 inch plus l/l6 inch for each additional inch of thickness provided that no more than twenty five percent (25%) of the test specimens show a deficiency.

When a test specimen has a greater deficiency and less than (25%) of the test specimens show a deficiency the contractor shall, at his own expense, determine the extent of the deficiency and correct it by removing and replacing the surface. The minimum width for such correction will be the full width of the pass or passes of the lay down machine in which the deficiency occurs.

The minimum length of such correction shall be three times the width removed. When more than (25%) of the test specimens show a deficiency the surface may at

the engineers option be declared uniformly deficient and the contractor shall correct the deficiency by removing and reconstructing the surface or by constructing an overlay of not less than l inch thickness over the deficient area. The construction of an overlay will require milling at lip lines and dips.

The corrected surface shall meet all the requirements of these specifications.

Asphaltic concrete pavement constructed under these specifications that is less than design thickness, if allowed to remain in place, will be paid for at a reduced rate determined by multiplying the unit price bid in the bid proposal by a thickness quality factor. This rate shall apply to the entire lot in which the deficiency is found.

The thickness quality factor for hot mix asphaltic concrete pavement less than 2 inches in thickness shall be:

Thickness Deficiency	Quality Factor
Maximum l/8" for any one specimen with no more than 25% of the specimens showing a deficiency.	l.0
Pavement not meeting the 25% limitation with an average specimen deficiency up to l/8 inch.	0.75
Average specimen deficiency of l/8 inch to l/4 inch	.55
Average deficiency of more than l/4 inch	0.0

The thickness quality factor for hot mix asphaltic concrete more than 2 inches thick will be l.0 if the maximum deficiency for any one specimen is l/8 inch plus l/l6 inch for each additional inch of thickness over 2 inches and not more than twenty five percent (25%) of the test specimens in the lot are deficient. For thickness test that fall outside this area either by single specimen thickness deficiency or more than twenty five percent (25%) of the specimens showing deficiency the thickness quality factor shall be computed as follows:

$$\text{Thickness Quality Factor} = \frac{1}{\left(\frac{1}{\text{Thickness Ratio}}\right)^2}$$

The thickness ratio for a lot is the average specimen thickness for that lot, with no allowance for thickness in excess of design, divided by the design thickness. For determining the average specimen thickness, those specimens in excess of design thickness shall be considered at design thickness.

The minimum thickness quality factor for which payment will be allowed is .55. Any pavement with a thickness quality factor below .55 will be considered as having a thickness quality factor of 0. This shall apply only if the contractor requests, in writing, to have this paving remain in place and this request is approved in writing by the engineer.

When the deficient area is in a lower course of a multi-course paving structure the contractor may reduce or correct the deficiency by increasing the thickness of the subsequent course or courses as follows:

When subsequent course is	Maximum increase in course thickness
Type B	1/2"
Type C	3/8"
Type D	1/4"

When corrected in this manner the thickness quality factor shall be determined using the combined thickness of the corrected courses and shall apply to all unit prices applicable to this lot.

The contractor may request permission to reconstruct a portion of the pavement when, in his opinion, the thickness quality factor can be improved. Upon approval of the engineer, the contractor shall take sufficient tests to isolate the portion or portions of pavement to be reconstructed and remove and reconstruct the pavement. All cost in connection with this reconstruction are to be born by the contractor. The minimum width of this reconstruction shall be l/2 the street width unless approved otherwise in writing by the engineer. The portions reconstructed shall be retested and the thickness quality factor recomputed using the new information along with the test from the area within the portion of the lot not reconstructed.

When other quality factor reductions are provided for on the plans or in the specifications the effect shall be cumulative ie: QFl x QF2 x QF3 x....x QFn x unit price.

No payment will be made for pavement with a combined quality factor of less than 0.5.

Compaction Test: Compaction test will be made by the commercial laboratory chosen by the owner on the core samples removed from the paving for thickness testing.

The percent air voids will be calculated using maximum theoretical specific gravity of the mixture.

The contractor may attempt to correct deficiencies in compaction by additional pneumatic rolling upon written permission of the engineer. Requests for permission to conduct additional rolling shall be submitted, in writing, to the engineer no later than three days following notification of the deficiency by the commercial laboratory and the additional rolling shall be completed within ten (l0) days following said notification weather permitting.

In no case shall the additional rolling be delayed beyond thirty (30) days from the date the surface was laid. All cost for additional rolling and additional coring and testing of the re-rolled surface shall be born by the contractor.

Asphaltic concrete pavement not meeting this specification and that is allowed to remain in place shall be paid for at a reduced rate determined by multiplying the price bid in the bid proposal by a compaction quality factor determined according to the following schedule:

Percent air voids (average of all specimens for the lot)	Compaction Quality factor	
less than 3	0	
3.0 to 8.0	1.0	
8.1 to 9.0	0.9	
9.1 to 10.0	0.7	
10.1 to 11.0	0.5	and the engineer may require a chip seal to be applied at the contractor's expense
More than 11		0 and the engineer may require a chip seal to be applied at the contractor's expense.

NOTE: HMAC surfacing with between 11% and 15% air voids may, upon written request by the Contractor, be reviewed by the Engineer to determine if it may be left in place. The Engineer's review will consider the type of street and expected traffic conditions among other factors and a written determination will be issued. If the surface is allowed to remain in place, a chip seal will be required at the Contractor's expense. The quality factor for this paving will remain at 0.

The reduced rate shall apply to the entire lot.

The effect of compaction quality factors shall be cumulative and shall be applied as described for surface quality factors and thickness quality factors.

Cost for Field Quality Control - The surface tolerance test shall be made by the contractor at his expense.

The initial thickness and compaction test will be made at no cost to the contractor except for the cost of materials and labor to repair the holes left when cores are removed.

The cost of all thickness test to isolate a deficient area and the cost of retesting the corrected area shall be born by the contractor.

The cost of all retesting of compaction after additional rolling to correct compaction deficiencies shall be born by the contractor.

Areas reconstructed to remedy deficiencies shall meet all the requirements of these specifications and shall be tested in the same manner as original construction. The cost of all tests on reconstructed areas shall be born by the contractor.

5. ADDITIVES

Anti-stripping: An approved liquid anti-stripping agent shall be added to the asphalt used in the hot mix asphaltic concrete. The rate of application shall be in accordance with the manufacturer's recommendation. The minimum anti-stripping agent added shall be one-half (l/2) of l%.

The anti-stripping agent used shall have a proven record when used with similar aggregate and shall be approved by the engineer in writing prior to the date set for reception of bids.

DOUBLE COURSE ASPHALT SURFACE TREATMENT

1. SCOPE

The work to be done under this section consists of furnishing all labor, materials and equipment necessary to construct a Double Asphalt Surface Treatment on the prepared base course in accordance with the sections shown on the plans and as specified herein or as directed by the Engineer.

2. MATERIALS

2.1 Asphalt

The asphalt used shall be of the grade and type specified below. The material shall be homogeneous and free from water, shall not foam when heated to 347° F., and shall meet the following requirements.

Viscosity Grade AC-5
Texas Highway Department 1982 Specifications

Viscosity 140 F. Stokes	500 +/- 100	
	Min.	Max.
Viscosity 140 F. Stokes	1.4	--
Penetration 77° F. 100 g. 5 sec.	135	--
Flash Point C.O.C.F.	425	--
Solubility in trichlorethylene percent	99.0	--

Tests on residues from thin film oven test:

Viscosity 140 F. Stokes	--	1500
Ductility, 77° F. 5 cms per min. cms.	100	--

Spot Test – negative for all grades.

2.2 Aggregate

All aggregate shall be composed of sound and durable particles of crushed stone or crushed gravel. At least eighty-five percent (85%) of the particles of the aggregate retained on the No. 4 sieve shall have one or more crushed faces. Aggregate particles shall be free from organic matter, clay, loam, or pebbles coated therewith, and shall not contain more that (5%) of slate, shale, schist or soft particles of sandstone. The aggregates shall have a percent of wear of not more than thirty-five (35). (Los Angeles Abrasion Tests of Coarse Aggregate, AASHO Designation

T-96 as revised). Crushed limestone will not be acceptable for this project.

Double Asphalt Surface Treatment

No. 1 Aggregate –	Retained on ¾" Sieve -	0% by weight
(Texas Highway	Retained on 5/8" Sieve -	0 – 2% by weight
Department 1982	Retained on ½" Sieve -	20, 35% by weight
Grade 3)	Retained on 3/8" Sieve -	85 – 100% by weight
	Retained on ¼" Sieve	95 – 100% by weight
	Retained on No. 10 Sieve-	99-100% by weight

No. 2 Aggregate -	Retained on ½" Sieve -	0% by weight
(Texas Highway	Retained on 3/8" Sieve -	0 – 5% by weight
Department 1982	Retained on No. 4 Sieve -	40 – 85% by weight
Grade 5)	retained on No. 10 Sieve -	98 –100% by weight
	Retained on No. 20 Sieve-	99 100% by weight

3. CONSTRUCTION METHODS

3.1 Preparation of base

If the surface of the base course is not in proper condition for placement of surfacing, it shall first be brought true to the section and grade as established. The base shall be checked, and any deviation in excess of ¼-inch from grade or from true cross section shall be corrected by scarifying then adding or removing material, reshaping and re-compacting by sprinkling and rolling. No "scab" or "featheredge" patches will be permitted. After correction of any defects in the base, it shall be cleaned of dirt, dust, or other deleterious material by sweeping or other approved methods and primed.

The base course shall be primed with MC-30 Asphalt as directed by the Engineer. The asphalt used shall meet the 1982 Texas Highway Department Specifications Item 300.

The base course shall be checked at least 24 hours in advance of placing the surfacing and any defects shall be repaired and re-primed. Immediately prior to placing the surfacing, the base shall be cleaned of all dirt, dust, or other deleterious materials by sweeping with rotary and hand brooms or other approved methods.

Prime coats shall not be applied more than 7 days in advance of placing the surface course. Areas that have been primed longer than the time

specified above prior to placing the surface course shall be re-primed at the Contractor's expense.

3.2 Handling and Applying Asphalt

All storage tanks, piping, retorts, booster tanks, and distributors used in storing or handling asphalt shall be kept clean and in good operating condition at all times, and they shall be operated in such a manner that there will be no contamination of the asphalt with foreign material. Asphalt shall not be heated above 400° F. at any time, and when applied, it shall be at a temperature of not less than 300° F. and not more than 350° F. The Engineer will select the temperature of application, and the Contractor shall apply the asphalt at a temperature within 15° of the temperature selected. All asphalt material heated above 400° F. will be rejected. Re-circulating heating equipment shall be equipped with recording temperature gauges.

The prime coat shall not be applied when the air temperature is below 50° F. and falling or when in the opinion of the Engineer weather conditions are not suitable. Prime coat shall not be applied when the temperature of the surface on which it is to be applied is less than 40° F. The prime coat shall be applied at least 24 hours in advance of placing the surface course. Prime coat shall be applied with an approved distributor at a rate of 0.30 gallon per square yard, or as directed by the Engineer.

Double Asphalt Surface Treatment shall not be applied when the temperature of the surface on which it is to be placed is below 50° F. and is falling but may be applied when the air temperature is above 40° F. and rising. No asphalt shall be placed when general weather conditions, in the opinion of the engineer, are unsuitable. No double asphalt surface treatment shall be placed from September 30 to April 15.

Asphalt shall be applied on the clean surface by an approved type of self-propelled pressure distributor so operated as to distribute the material in the quantity specified, evenly and smoothly, under a pressure necessary for proper distribution. The Contractor shall provide necessary facilities for determining the temperature of the asphalt in all of the heating equipment and in the distributor, for determining the rate and pressure at which it is applied, and for securing uniformity at the junction of two distributor loads. The beginning and ending of each shot of asphalt shall start and stop on a strip of heavy craft paper of not less than thirty (30) inches in width.

In areas inaccessible to the distributor, asphalt shall be applied by means of a hose and spray nozzles attached to the distributor. Care shall be

taken during application of any asphalt to shield the curb and gutter from the asphalt spray; satisfactory means of handling this matter will be insisted upon.

3.3 Application of Aggregate

Immediately after making the first application of asphalt, the surface shall be covered with No. 1 aggregate. The aggregate shall be spread with an approved self-propelled continuous feet aggregate spreader box, or approved equal, at rates as specified below or as directed by the Engineer. If necessary to obtain uniform distribution of aggregates, hand brooming and hand spotting of aggregates will be required. After completion of placing the aggregates, all areas shall be bull-wheeled with a three- wheeled roller weighing not less than 8 tons followed immediately by two complete passes with an approved self propelled pneumatic roller.

The second application of asphalt shall then be made and the No. 2 aggregate shall be applied in the same manner as stated above for the No. 1 aggregate. The Contractor shall be responsible for the maintenance of the surface and the distribution of the excess aggregate until the work is accepted.

On the two successive days following completion of the work as specified above, all areas shall be rolled with at least four complete coverage's with a pneumatic roller. This rolling shall be done in the warm part of the day.

3.4 Rate of Application of Materials

The asphalt and aggregate shall be applied at the rates specified in the following schedule:

Double Asphalt Surface Treatment

Application	Aggregate Gal. Asphalt/Sq. Yd.	Aggregate Cu. Yd. To Sq. Yds.	Designation
First	0.30	1:70	No. 1
Second	0.40	1:110	No. 2

3.5 Cleanup

After completion of the asphalt surfacing, all debris resulting from the construction shall be cleaned up and removed from the site of the work to

an approved place of disposal. The ditches, shoulders and back slopes shall be bladed and graded to true grades and cross sections as shown on the plans. The entire premises of the work shall be left in a clean condition satisfactory to the Engineer, and all costs of cleanup shall be included in the contract unit prices for the items of work involved.

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2. MATERIALS 1
2.1 Asphalt 1
Viscosity Grade AC-5 1
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Viscosity 140 F. Stokes 1.4 --..... 1
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3. CONSTRUCTION METHODS 2
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3/2006

PREPARATION OF ASPHALTIC CONCRETE SURFACE FOR OVERLAY OR SEAL COAT

1. GENERAL

This item includes patching, milling and incidentals to prepare the asphaltic concrete surface for tack coating and overlay or for application of a seal coat.

2. MATERIALS

a. Asphalt

Asphalt for hot mix asphaltic concrete shall be Grade ACl0 Texas Highway Department Item 300.

Asphaltic concrete shall be Type D or Type F Texas Highway Department Item 340 except when the overlay is the second phase of phased construction in which case the asphaltic concrete for full depth patching shall be the grade as shown on the plans.

b. Portland Cement Stabilized Base

Cement stabilized base shall conform to Texas Highway Department Item 274 and shall consist of caliche base materials described in Section 2-C of this specification. Stabilized using 2 sacks of Portland cement per cubic yard. Cement stabilized base may be blade mixed at or near the job site if the contractor can produce a uniformly mixed acceptable product by this method.

3. PATCHING

a. Patching Surface Raveling

Where, in the opinion of the engineer, surface raveling has caused sufficient loss of material to require patching, the contractor shall thoroughly clean the area to be patched by brooming, and/or compressed air nozzle. When the patched area is completely free of loose aggregate and other foreign matter the contractor shall lightly brush the area with emulsified asphalt type SS1 and apply Type F hot mix asphaltic concrete. The asphaltic concrete shall be raked using an asphalt rake and finished smooth a little higher than the existing surrounding surface and compacted using a steel wheel roller and/or a pneumatic roller. Rollers shall be sufficient size and weight to achieve

adequate compaction. Small areas may be compacted using vibrating plate compacters when approved by the Engineer.

b. Patching Deteriorated Surface

When, in the opinion of the engineer, the surface has deteriorated to a point where replacement is required the engineer shall mark the area to be removed and replaced. The contractor shall saw cut for the full depth of the asphaltic concrete and remove said pavement. The saw cut shall be rectangular in shape with the edges being parallel to and at 90` to the centerline of the street. The minimum width for any patch shall be one (l') foot. After the surface has been removed the base shall be carefully smoothed and all loose base material shall be removed. When needed the base shall be reprimed using a light shot of RC 250 or MC 30 asphalt. After the prime coat has penetrated the base material, the contractor shall apply tack coat to the sawed edges of the surface and place Type D asphaltic concrete to a sufficient depth above the existing surface to provide a compacted surface slightly higher than the adjacent surface. The patch shall be compacted to a density of 92% to 97% Rice density using steel wheel and or pneumatic rollers.

c. Patching Deteriorated Substructure

When the base and or subgrade have failed and are to be removed, the contractor shall remove the surface as specified for deteriorated surface patching. The weakened base shall be removed to a uniform depth to expose undamaged base or subgrade. The minimum depth of removal shall be six (6") inches. The base and subgrade thus removed shall be replaced with Portland cement stabilize base and compacted to 95% modified proctor density and finished at the level of the abutting base. The finished base shall be primed and the surface replaced as specified for patching deteriorated surface.

4. MILLING

Surface milling shall be accomplished using approved asphalt milling machines. The maximum depth of milling shall be one (l") inch.

Milling shall be as directed by the engineer to remove asphaltic concrete placed at valley gutters, gutters and at the ends of the first phase of phased construction for drainage and to remove the asphaltic concrete placed for a smooth connection between that phase and the existing paving. The Engineer may also direct milling to

remove ridges and ruts that have formed on the pavement surface.

The Contractor shall be responsible for controlling the milling operation so that only these areas which require milling are milled. No measurement or payment will be made for milling where only superficial surface marks are left and from which no material is removed. When milling is required to remove ridges and ruts the low areas between ridges and ruts will be considered as "milled surface" for payment.

If a smooth straight joint can not be made by milling the contractor may be required to saw cut a one (l") inch depth groove at the edge of the milled area and remove material between the saw cut and the milled area by hand. No separate payment will be made for this saw cut when required.

5. MEASUREMENT AND PAYMENT

a. Patching Surface Raveling

Measurement will be made of the actual square footage of surface area patched. Payment will be made at the price bid per square foot for patching surface raveling in the bid proposal.

b. Patching Deteriorated Surface

Measurement will be made of the square yards of street surface replaced.

Payment will be made for the actual number of square yards of street surface replaced at the price bid per square yard for patching deteriorated surface in the bid proposal.

c. Portland Cement Stabilized Base

Measurement will be made of the actual cubic yards of compacted cement stabilized base in place.

Payment will be made at the price per cubic yard bid for compacted in place Portland cement stabilized base in the bid proposal.

d. Saw Cutting

Measurement will be made of the actual length of full depth saw cut made as directed by the engineer. No measurement will be made of the sawing required to square up poor milling edges.

Payment will be made at the price per linear foot of full depth saw cutting for the actual number of feet of saw cut as measured above.

No payment will be made for saw cutting required to square up the edges left by improper, inadequate or poor quality milling.

e. Milling

Measurement will be made of the actual area milled. No measurement will be made of areas where milling leaves only superficial surface marks from which no material was removed.

Payment will be made for the actual number of square yards of surface milling as measured above at the unit price bid per square yard of surface milling in the bid proposal.

01/04

SEAL COAT

I. DESCRIPTION

This item shall consist of the application of liquid asphalt to the existing pavement surface followed by placement of cover aggregate and rolled to increase adhesion, together with other operations necessary to form a complete durable seal coat.

II. MATERIALS

A. Asphaltic Materials

The material shall be homogeneous, shall be free from water, shall not foam when heated to 347 degrees F and shall meet the following requirements:

		VISCOSITY GRADE	
TEST		AC-5 Min/Max	AC-10 Min/Max
Viscosity, 140 F stokes		500+100	1000+200
Viscosity, 275 stokes		1.4	1.9
Penetration, 77F, 100g, 5 sec.		135	85
Flash Point, C.O.C.F.		425	450
Solubility in trichlorethylene	%	99.0	99.0
Tests on residues from thin film oven test: Viscosity, 140 F stokes		1500	3000
Ductility, 77 F 5cms per min, cms		100	70
Spot Test		Negative for all grades	

B. Storage, Heating and Application Temperatures

Asphalt materials should be applied at the temperature which provides proper and uniform distribution and within practical limits avoiding higher temperatures than necessary. Satisfactory application usually should be obtained within the recommended ranges shown below. No material shall be heated above the following maximum temperatures:

Applications and Mixing

TYPE-GRADE	Recommended Range, F	Maximum Allowable, F	Heating and Storage Maximum, F
AC-5, 10	275-350	375	400

NOTE:Heating of asphalt materials (except emulsions) constitutes a fire hazard to various degrees. Proper precautions should be used in all cases and especially with RC cutbacks.

Warning to Contractors: Attention is called to the fact that asphaltic materials are very flammable. The utmost care shall be taken to prevent open flames from coming in contact with the asphaltic materials or the gases of same. The Contractor shall be responsible for damages from any fires or accidents which may result from heating the asphaltic materials.

C. Additives

1. Latex Additive: A minimum of two percent by weight latex additive (solids basis) shall be added to AC-5 asphalt when specified on the plans or in other specifications in the contract. The latex additive shall be governed by the following specifications:

The latex is to be an anionic emulsion of butadiene-styrene low-temperature copolymer in water, stabilized with fatty-acid soap so as to have good storage stability, and possessing the following properties:

Monomer ratio, B/S 70/30
Minimum solids content 67%
Solids content per gal @ 67% ..... 5.3 lbs
Coagulum on 80-mesh screen ..... 0.1% max

Type Anti-oxidant ..... staining
Mooney Viscosity of Polymer
(M/L4 @ 212 F) ....100 min
pH of Latex ..... 9.4 - 10.5
Surface Tension ..... 28-42 dynes/cm^2
Brookfield Viscosity
of Latex ..... 1200 ps max @ 67% solids

The finished latex-asphalt shall meet the following requirements:

Viscosity at 140 F, stokes ..... 1500 max
Ductility at 39.2F, 1cm per min, cm..... 100 min

2. Anti-stripping Agent. An approved liquid anti-stripping agent shall be added to the asphalt used on this project when called for on the plans or elsewhere in the specifications or bid proposal. The rate of application shall be in accordance with the manufacturers recommendations. The minimum anti-stripping agent added shall be one/half (1/2) of 1%. The anti-stripping agent shall be Permatac or approved equal.

D. Regular Aggregate

Regular aggregate shall be Type B Grade 4 or Grade 5 crushed gravel, or crushed stone as specified in Item 302 of the Texas State Department of Highways and Public Transportation (T.S.D.H.P.T.) 1982 Standard Specification for Construction of Highways, Streets, and Bridges with the following exceptions:

1. Limestone other than natural limestone rock asphalt will not be approved for use on this project.

2. Aggregate shall contain not more than 1% by weight of organic matter, clays, loam or pebbles coated therewith and shall contain not more than 5% by weight of any one of or combination of slate, shale, schist or soft particles of sandstone when tested in accordance with Test Method Tex-217-F.

3. Aggregate Gradation, expressed as a percentage of weight, shall be as follows:

Grade 4	Percent by Weight		
Retained on 5/8" sieve			0
Retained on 1/2" sieve	0	-	2
Retained on 3/8" sieve	5	-	35
Retained on No. 4 sieve	80	-	100
Retained on No. 10 sieve	98	-	100
Passing No. 200 sieve	0	-	0.5

Grade 5	Percent by Weight		
Retained on 1/2" sieve			0
Retained on 3/8" sieve	0	-	5
Retained on No. 4 sieve	40	-	85
Retained on No. 10 sieve	98	-	100
Retained on No. 20 sieve	99	-	100

When no aggregate grade is shown on the plans or called for elsewhere in the specifications or bid proposal, Grade 5 aggregate will be furnished.

4. The percent of wear, as determined by ASTM C-131, shall not exceed 25%.

5. The percent loss of the aggregate, as determined by ASTM C-88 using a magnesium sulfate solution and a four cycle test, shall not exceed 30%.

E. Precoated Aggregate

Precoated aggregate shall be Type PB Grade 4 or Grade 5 crushed gravel, or crushed stone as specified in Item 304 of the T.S.D.H.P.T. 1982 Standard Specification for Construction of Highways, Streets, and Bridges with the following exceptions:

1. Those exceptions listed in Paragraph II 2(B) above.

2. The precoated aggregate shall be coated with 1.0 to 2.0 per cent by weight of asphaltic cement of Grade AC-20.

F. Joint Paper

Paper used for starting and stopping asphalt application, as well as making fabricated paper discs to protect manhole covers and valve covers, shall be a non-absorbent, high grade 60# Kraft paper, 30" in width.

The contractor shall cover all manhole and valve box lids with paper discs, furnished by Contractor, immediately before application of asphalt and remove same immediately after application of rock.

G. Delivery Tickets

A legible copy of the delivery tickets for all materials to be used on this project shall be furnished to the City's representative at the time materials are delivered to the project stock pile and storage site.

III. CONSTRUCTION METHODS

A. Equipment

In general, all equipment used on this project shall be in good working order and in sufficient quantity to insure proper expedition of the seal operation.

1. Asphalt Handling Equipment

The asphalt distributor shall have been recently calibrated and the Engineer shall be furnished an accurate and satisfactory record of such calibration. The distributor shall be an approved type of self-propelled pressure distributor so operated as to distribute the material in the quantity specified, evenly and smoothly, under a pressure necessary for proper distribution. The Contractor shall provide all necessary facilities for determining the temperature of the asphaltic material in all of the heating equipment and in the distributor, for determining the rate at which asphalt is applied, and for securing uniformity at the junction of two distributor loads. All storage tanks, piping, retorts, booster tanks, and distributors used in storing or handling asphaltic material shall be kept clean and in good operating

condition at all times, and they shall be operated in such manner that there will be no contamination of the asphalt with foreign material. It shall be the responsibility of the Contractor to provide and maintain in good working order a recording thermometer at the storage heating unit at all times.

2. Drag Broom

A drag broom shall be required if the aggregate is not properly distributed. The drag broom shall be furnished at no additional cost to the City.

3. Pneumatic-tire Roller

Pneumatic-tire rollers shall be of the self-propelled type consisting of not less than 7 pneumatic-tired wheels, running on axles in such manner that the rear group of tires will not follow in the tracks of the forward group, and mounted on a rigid frame and provided with a loading platform or body suitable for ballast loading. The roller shall be not less that 10 tons in weight and carry not less than 50 pounds pressure in each tire.

4. Aggregate Spreader

Aggregate spreader shall be an approved self-propelled continuous feed aggregate spreader. The spreader shall be equipped with a disposable trash box for placing debris removed from spreader box scalping screen.

5. Miscellaneous Equipment

The Contractor shall have available for immediate use at no additional cost one rock blade and one drag broom if their use is required by the Engineer. These pieces of equipment shall not be pulled by rollers. In addition, the Contractor shall furnish one tail gate aggregate spreader and one dump truck, equipped to receive the tail gate spreader.

6. Truck Scale

A truck scale conforming to the requirements of item 520 of "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges" shall be furnished by the Contractor at aggregate stockpile sites.

B. Surface Preparation

The City of Midland will sweep all streets to be sealed ahead of the Contractor. This sweeping by the City of Midland is not intended to be a final cleaning preparation for the application of asphalt but is intended as an aid to the Contractor.

Prior to placing the seal coat, loose dirt and other objectionable material shall be removed from the existing surface by the Contractor. The surface will be cleaned with rotary brooms. Hand brooms will be used in areas not accessible to the rotary broom. The Engineer shall approve all streets before application of any asphalt.

C. Application of Bituminous Material

Paper shall be spread on the surface for a sufficient distance back form the end of each application so that flow through sprays may be started and stopped on the paper, and so that all sprays will operate properly over the entire length being treated.

No asphaltic material shall be applied when the total of air temperature plus pavement surface temperature is less than 120" F.

No equipment or vehicular traffic shall be allowed to cross over joint paper in place, except the distributor.

Immediately following the application of asphaltic material, the Contractor shall remove all joint paper and load same on a designated vehicle. At the end of each day, all paper shall be disposed of at the City Landfill.

Following all preparation outlined above, the Contractor shall immediately apply asphaltic materials at the specified rates and temperatures designated by the Engineer.

If the Contractor employs only one distributor in the seal operation, he shall be required to seal all designated filets and street stubs in the seal area before moving to another section of the City. If two distributors are used, one distributor will be employed only to seal filets and street stubs.

The use of a second distributor to seal filets and street stubs shall require the following additional equipment; one dump truck equipped with tailgate spreader, and one self-propelled pneumatic roller. All rolling shall be deferred until aggregate is dry.

D. Application of Aggregate

Aggregate shall be immediately and uniformly applied and spread by an approved self-propelled continuous-feed aggregate -8- spreader, unless otherwise authorized by the Engineer. Aggregate shall be applied at the approximately rate directed by the Engineer.

Vehicles used to transport aggregate from stockpiled area to spreading machine shall be weighed and a weight ticket issued for each load. Weight tickets shall show truck identification No., tare weight of truck, gross weight, and net weight of aggregate. The weight ticket shall be delivered to the city's representative at the aggregate spreader.

E. Rolling

A minimum of three (3) rollers shall be employed by the Contractor. Rolling shall be controlled by the Engineer during the entire project. The speed of all rollers will be held to a maximum of 5 miles per hour during the rolling process. When surface moisture is present on aggregate, "Rolling shall be deferred until aggregate is dry.

F. Stockpiling

All aggregate stockpiles shall be placed on a paved surface or areas acceptable to the Engineer.

When dust from the aggregate creates a nuisance or when aggregate fails to adhere to the asphalt the Engineer may require the Contractor to "water down" the aggregate stock pile.

When, directed by the Engineer, or desired by the Contractor, aggregate stockpiles will be "watered down". When the "watered down" aggregate does not adhere to the asphalt properly the Engineer may direct that water for this purpose contain 5% EA10S emulsified asphalt and/or an approved wetting agent. The Engineer may direct the contractor to increase the amount of emulsified asphalt added to the water if, in his opinion, desired results are not being achieved. No separate payment shall be made for emulsified asphalt, water or wetting agent but the cost shall be considered as an incidental cost for furnishing satisfactory aggregate.

G. Cleanup

Clean up shall be maintained on a timely manner as the work progresses. All debris scattered on the sidewalks and driveways shall be swept up by the Contractor. Sweeping debris onto freshly sealed streets shall not be allowed.

City forces will remove excess aggregate from the street and gutters after the project is completed.

H. Maintenance

The Contractor will be required to maintain all sealed streets until final acceptance of the project by the Engineer. Maintenance shall consist of adding additional coverstone when required, rolling, pony blading, or drag brooming.

IV. MEASUREMENT

Asphaltic material shall be measured in gallons at the applied temperature at the point of application.

Aggregate shall be measured by the ton in vehicles as delivered to the aggregate spreader and applied on the street. Trucks will not be allowed to leave the construction area with a partial load. If it becomes necessary for a truck to leave the area because of mechanical failure or other reasons, a second weigh ticket for that truck will be required.

Rolling shall be measured by the hours of actual rolling for each roller.

V. PAYMENT

Payment shall be made as provided under "Measurement" at the unit price bid for "aggregate", "asphalt", and "rolling" and shall be full compensation for furnishing and incorporating the materials "Aggregate" and "Asphalt" (and additives where applicable) into a composite product; for delivering, stockpiling; for brooming, compaction, and rolling; for cleaning the existing surface; for cleaning excess bituminous material; cleaning gutters; for cleaning sidewalks and driveways; for cleaning stockpile sites; for all required maintenance; for pony blading; for drag brooming; for adding additional cover aggregate; for all labor, equipment, supervision, tools, overhead, profit, and any other incidentals necessary to complete the work required under the conditions of these plans and specifications to the satisfaction of the Engineer.

08/07

ASPHALT - RUBBER SEAL COAT

(Stress Absorbing Membrane)

1. SCOPE

This specification covers the material, equipment, and construction procedures for a Stress Absorbing Membrane (seal coat).

2. PREQUALIFICATION OF A NEW ASPHALT-RUBBER MATERIAL

Pre-qualification of a new asphalt-rubber material or applicator may be requested at any time. Pre-qualification will be based on three controlled field applications evaluated after three years' performance under traffic. New asphalt-rubber material that has been evaluated and pre-qualified by an agency recognized nationally may be pre-qualified by that agency upon disclosure of suitable evidence of successful performance. Notwithstanding other agency pre-qualification, the City reserves the right to withhold pre-qualification pending the performance evaluation of local controlled field applications.

3. MATERIALS

3.1 Asphalt

The grade of asphalt cement for the asphalt-rubber mixture shall be AC - 5 or AC - 10 which shall comply with the requirements of Item 300 "Asphalt, oils and emulsions" of Texas State Department of Highways and Public Transportation 1982 Standard Specification for Construction of Highways, Streets and Bridges. The grade selected shall be based on laboratory testing by the asphalt-rubber supplier, to insure compatibility with the granulated reclaimed rubber.

If indicated necessary by laboratory testing, an approved anti-stripping additive may be added to the asphalt cement up to 1.0 percent by weight of asphalt.

3.2 Granulated Reclaimed Rubber

The granulated reclaimed rubber used shall be produced primarily from the processing of automobile and truck tires. The rubber shall be produced by ambient temperature grinding processes only.

The gradation of the granulated reclaimed rubber when tested in accordance with ASTM C-136 and using a 50 gram +/- 1 gram sample, shall meet the

following requirements:

Sieve Sizes	Percent Passing
#8	100
#10	95 - 100
#16	40 - 60
#30	0 - 10
#50	0 - 5

The use of rubber from multiple sources is acceptable provided that the overall blend of rubber meets the gradation requirements.

The individual granulated rubber particles, irrespective of diameter, shall not be greater in length than 3/16 inch (5mm).

The granulated rubber shall have a specific gravity of 1.15 +/- 0.05 and shall be free of loose fabric, wire and other contaminants except that up to 4 percent (by weight of rubber) calcium carbonate or talc may be added to prevent rubber particles from sticking together. The rubber shall be sufficiently dry so as to be free flowing and not produce a foaming problem when blended with the hot asphalt cement.

The granulated reclaimed rubber shall be accepted by certification from the rubber supplier.

3.3 **Diluent**

The diluent shall have the following properties:

Flash Point	130^{o} F Minimum
Initial Boiling Point (ASTM D-86)	340^{o} F Minimum
Dry Point (ASTM D-86)	390^{o} - 415^{o} F
Total Saturates	85% Minimum

3.4 **Asphalt - Rubber**

The asphalt-rubber supplier shall furnish to the engineer a minimum of 10 days before the beginning of membrane placement, the asphalt-rubber mix formulation which shall contain the following information:

Asphalt Cement
Source of Asphalt Cement

Grade of Asphalt Cement
Percentage of Asphalt Cement by total weight of the asphalt-rubber mixture.

Granulated Reclaimed Rubber
Source of Granulated Rubber
Grade of Granulated Rubber
Percentage of Granulated Rubber by total weight of the asphalt-rubber mixture.

If granulated rubber from more than one source is utilized the above information will be required for each granulated rubber used.

Diluent
Source of Diluent
Grade of Diluent
Percentage of Diluent allowable by volume of the asphalt-rubber mixture.

3.5 **Cover Aggregate**

Aggregate shall be composed of a clean and durable crushed rock, crushed gravel or crushed slag conforming to Item 304 "Aggregate for Surface Treatments (pre-coated)" of Texas State Department of Highways and Public Transportation 1982 Standard Specification for Construction of Highways, Streets and Bridges, grade No. 3 or No. 4.

Proposed aggregate samples shall be submitted to the asphalt-rubber supplier a minimum of 21 days prior to application, to test for aggregate stripping characteristics. The results shall be submitted to the engineer. Anti-strip will be included as a contingency bid item.

4. **EQUIPMENT**

4.1 **General**

The equipment used by the contractor shall include a self propelled rotary power broom or mobile pickup broom for pavement cleaning and excess cover material removal.

4.2 **Asphalt-Rubber Equipment**

All equipment utilized in the production and application of the asphalt-rubber shall be so designed and accessible that the Engineer can readily determine

the percentage by weight for each material being incorporated into the mixture and shall be as described as follows:

4.2.1 An asphalt heating tank with a hot oil heat transfer system or retort heating system capable of heating asphalt cement to the necessary temperature for blending with the granulated rubber. This unit shall be capable of heating a minimum of 3,000 gallons of asphalt cement.

4.2.2 An asphalt-rubber mechanical blender with a two stage continuous mixing process capable of producing a homogenous mixture of asphalt cement and granulated rubber, at the mix design specified ratios, as directed by the engineer. This unit shall be equipped with a granulated rubber feed system capable of supplying the asphalt cement feed system, as not to interrupt the continuity of the blending process. A separate asphalt cement feed pump and finished product pump are required. This unit shall have both an asphalt cement totaling meter in gallons and a flow rate meter in gallons per minute.

4.2.3 A truck mounted self powered distributor truck equipped with a retort heating unit, and an internal mixing device capable of maintaining a uniform mixture of asphalt cement and granulated rubber. It shall be equipped with a full circulating spreader bar and a pumping system capable of applying asphalt-rubber material within +/- .05 gallons per square yard tolerance of the specified application rate and must give a uniform covering of the surface to be treated. The distributor shall have a boot board on the rear of the vehicle and a bootman shall accompany the distributor. The bootman shall ride in a position so that all spray bar tips are in full view and readily accessible for unplugging if a plugged tip should occur. The distributor shall also include a tachometer, pressure gauge, volume measuring device and a thermometer.

4.3 Cover Material Spreader

The cover material (chip) spreader shall be a self-propelled machine with an aggregate receiving hopper in the rear, belt conveyors to carry the aggregate to the front, and a spreading hopper equipped with a full-width distribution auger and spread roll. The spreader shall be in good mechanical condition and be capable of applying the cover material uniformly across the spread at the specified rate.

4.4 Rolling Equipment

A minimum of three operational self-propelled pneumatic-tired rollers shall be used for the required rolling of the cover material. The pneumatic tired rollers shall carry a minimum loading of 3,000 pounds on each wheel and a

minimum air pressure of 100 pounds per square inch in each tire.

4.5 **Hauling Equipment**

Trucks for hauling cover material shall be tailgate discharge and shall be equipped with a device to lock onto the hitch at the rear of the cover material spreader. Haul trucks shall also be compatible with the cover aggregate spreader so that the dump bed will not push down on the spreader when fully raised or have too short a bed which results in aggregate spillage while dumping into the receiving hopper.

5. **CONSTRUCTION**

5.1 **General**

Streets to receive the asphalt-rubber stress absorbing membrane or seal coat shall be prepared in accord with Section 2-C-1 "Preparation of Asphaltic Concrete Surface for Overlay or Seal Coat" of these specifications.

Immediately prior to the application of the asphalt-rubber membrane, the surface shall be thoroughly cleaned in order to insure adequate adhesion of the asphalt-rubber to the pavement.

Due to the handling characteristics of asphalt-rubber, when radii and other irregular areas are to be sealed it is recommended that this be done with an RS or CRS chip seal emulsion or paving grade asphalt cement.

5.2 **Asphalt-Rubber Mixing and Reaction**

The percentage of granulated rubber shall be 23 percent plus or minus 3 percent by weight of total asphalt-rubber mixture, the exact granulated rubber content shall be as determined by the mix design submitted by the asphalt-rubber supplier. During membrane placement the granulated rubber percentage shall not fluctuate more than 1 percent by weight of total asphalt-rubber mixture.

The temperature of the asphalt cement shall be between 350^{o} and 400^{o} F at the addition of the granulated rubber. The asphalt and rubber shall be combined and mixed together in the asphalt-rubber blending unit and reacted in the distributor for a period of time as required by the engineer which shall be based on laboratory testing by the asphalt-rubber supplier. The temperature of the asphalt-rubber mixture shall be above 350^{o} F during the reaction period.

After the reaction between asphalt cement and granulated rubber has occurred, the viscosity of the hot asphalt-rubber-mixture may be adjusted for spraying and/or better "wetting" of the cover material by the addition of a diluent. The diluent shall comply with the requirements of Section 3.3 and shall not exceed 7.5 percent by volume of the hot asphalt-rubber mixture.

When a job delay occurs after full reaction, the asphalt-rubber may be allowed to cool. The asphalt-rubber shall be reheated slowly just prior to application but not to a temperature exceeding 350° F. An additional quantity of diluent not exceeding 3 percent by volume of the hot asphalt-rubber mixture may be added after reheating.

5.3 Application of Asphalt-Rubber Material

Placement of the asphalt-rubber membrane shall be made only under the following conditions.

1. The pavement surface temperature shall be 45° F and rising.

2. The pavement surface is clean and absolutely dry.

3. The wind conditions are not excessive.

4. All construction equipment such as asphalt-rubber distributor, cover material spreader, haul trucks with cover material, and rollers are in position and ready to commence membrane placement operations.

5. Rain is not imminent.

The asphalt-rubber mixture shall be applied at a temperature of 300° to 350° F at a rate of between .55 and .65 gallons per square yard. Transverse joints shall be constructed by placing building paper across and over the end of the previous asphalt-rubber application. Once the spraying has progressed beyond the paper, the paper shall be removed immediately and disposed of as directed by the engineer. All longitudinal joints shall not exceed a four inch overlap.

5.4 Application of Cover Material

Cover material shall be applied immediately to the asphalt-rubber after spreading at a rate of 25 to 35 pounds per square yard.
At the time of application to the asphalt-rubber, cover material shall be

surface dry so as to gain proper adhesion to the asphalt-rubber material.

5.5 Rolling

At least three operational pneumatic-tired rollers complying with the requirements of Section 4.4 shall be provided to accomplish the required embedment of the cover material. At some project locations or where production rates dictate, fewer rollers may be utilized as directed by the engineer. At no time shall there be less than two operational pneumatic tired rollers on a project.

Sufficient rollers shall be used for the initial rolling to cover the width of the aggregate spread with one pass. The first pass shall be made immediately behind the cover material spreader, and if the spreading is stopped for an extended period, the cover material spreader shall be moved ahead or off the site so that all cover material may be immediately rolled. Four complete passes with rollers shall be made with all rolling completed within one hour after the application of the cover material.

5.6 Traffic Control

Except when it is necessary that hauling equipment must travel on the newly applied membrane, traffic of all types must be kept off the membrane until it has had time to set properly. The speed of all hauling equipment shall not exceed 15 miles per hour when traveling over a membrane which is not adequately set. The minimum traffic free period shall not be less than one hour.

5.7 Removing Loose Cover Material

Sweeping can begin a minimum of one hour after membrane placement.

5.8 Method of Measurement and Basis of Payment

5.8.1 Asphalt-Rubber

a) Measurement will be made of the actual number of gallons of Asphalt-Rubber including asphalt placed in accord with these specifications.

b) Payment will be made at the price bid per gallon of Asphalt-Rubber in the bid proposal and will be full compensation for furnishing all asphalt, rubber, extender and for all labor,

equipment and incidentals for placing the asphalt-rubber on the Street surface.

5.8.2 **Cover Aggregate**

a) Measurement will be made of the actual number of tons of pre-coated aggregate placed in accord with these specifications.

b) Payment will be made at the price bid per ton of pre-coated aggregate in the bid proposal and shall be full compensation for furnishing all pre-coated aggregate and for all labor and equipment including rollers and rolling for the complete surface in place.

5.8.3 **Rolling**

a) No measurement will be made of rolling but rolling shall be considered as incidental to placing of the cover aggregate.

b) No separate payment will be made for rolling. The cost of rolling shall be included in the price per ton of cover aggregate in the bid proposal.

5.8.4 **Anti strip agent**

a) Anti stripping agent, when used, shall be measured by the gallon.

b) Payment for anti stripping agent shall be made at the price per gallon of anti stripping agent bid in the bid proposal.

08/07

POLYMER MODIFIED SLURRY SEAL (MICRO-SURFACE)

I. SCOPE

This specification covers the design, application, testing, quality control and measurement and payment for a complete in place "polymer modified micro surface" constructed on existing paved surfaces cleaned and prepared in accordance with the item 2-C-1 "PREPARATION OF ASPHALTIC CONCRETE SURFACE FOR OVERLAY OR SEAL".

2. DESCRIPTION

This specification covers all materials, equipment, construction and application procedures for rut filling and/or surfacing of existing paved surfaces. The micro-surfacing shall be a mixture of cationic polymer modified asphalt emulsion, mineral aggregate, mineral filler, water and other additives, properly proportioned, mixed and spread on the paved surface in accordance with this guideline and as directed by the Engineer.

3. MATERIALS

3.1 Emulsified Asphalt

(1.) The emulsified asphalt shall be a cationic emulsified type, designated as CSS-1P and shall comply with the following requirements.

	Min.	Max.
Viscosity, Saybolt Furol, 25 C (77 F), Sec.	**20**	**100**
Storage Stability test, one day, percent	**-**	**1**
Particle charge test		**Positive**
Sieve test, percent	**-**	**0.1**
Distillation:		**-** **-**
Oil distillate, by volume of emulsion, %	**-**	**0.5**
Residue, %		**62** **-**
Test on Residue from Distillation:		
Penetration, 77 F, 100 g, 5 seconds	**55**	**90**
Ductility, 77 F, 5 cm/min, cm	**70**	**-**
Solubility in trichloroethylene , %	**97**	**-**
Softening Point, R. & B., F	**135**	**-**
Viscosity, absolute 60 C (140 F), Poise		**8000** **-**

This standard distillation procedure shall be modified as follows: The temperature on the lower thermometer shall be brought slowly to 350 degrees plus or minus 10 degrees F and maintained at this point for 20 minutes. Complete the total distillation in 60 plus or minus 5 minutes from the first application of heat.

(2). The emulsion shall be modified with an approved Polymer. The distillation residue of the modified emulsion shall contain a minimum of three percent (3%) polymer solids by weight. The modified emulsion shall pass all applicable storage and settlement tests. The polymer material shall be milled into the emulsion or blended into the asphalt cement prior to the emulsification process. The cement-mixing test shall be waived for this emulsion.

(3). The polymer modified emulsified asphalt shall be so formulated that when the paving mixture is applied with the relative humidity at not more than 50% and the ambient temperature at least 75^{o} F, the paving mixture will sufficiently cure so that uniformly moving traffic can be allowed in approximately one hour. Locations such as driveways, Intersections and where sharp turning may take place or where vehicles may accelerate sharply, additional curing time may be required.

(4). The contractor shall notify the Engineer of the source of his asphaltic material prior to the design or production of the surfacing mixture and this source shall not be changed during the course of the project, except on written permission by the Engineer.

3.2 Mineral Aggregate

(1) Description. One Hundred percent (100%) of the mineral aggregate shall be crushed and shall be composed of clean, tough and durable particles of traprock, granite, sandstone or other approved aggregates. A sand equivalent of 65 or higher is required. The aggregate shall have a weight loss of not more than 12% when sodium sulfate is used or 18% when magnesium sulfate is used in accordance with Test Method Tex-411-A, using 5 cycles. The aggregate shall be one that has proven resistant to polishing in roadway surfacing.

(2.) Grades. When tested by Test Method Tex-200-F, Part I, the gradation requirements shall be as follows:

Grade 1 (Fine Graded Surface Course)	Percent Aggregate By Weight
Passing 3/8" sieve	100
Passing No. 4 sieve	98-100
Passing No. 8 sieve	75 -90
Passing No. 16 sieve	50- 75
Passing No. 30 sieve	30- 50
Passing No. 50 sieve	18- 35
Passing No. 200 sieve	5 -15

Grade 2 (Coarse Graded Surface Course)	Percent Aggregate By Weight
Passing 1/2" sieve	100
Passing 3/8" sieve	99-100
Passing No.4 sieve	86- 94
Passing No. 8 sieve	45- 65
Passing No. 16 sieve	25- 46
Passing No. 30 sieve	15 - 35
Passing No. 50 sieve	10 - 25
Passing No. 200 sieve	5- 15

(3.) Mineral Filler. Mineral filler shall be non-air entrained Portland cement that is free of lumps or foreign matter.

3.3 Water

The water shall be portable and shall be free of harmful soluble salts.

3.4 Other Additives

Additives supplied by the emulsion manufacturer may be added to the emulsion mix or to any of the component materials to provide control of the set time in the field.

4. LABORATORY EVALUATION

4.l General

Before work commences, the contractor shall submit a signed mix design covering the specific materials to be used on the project. This design shall be performed by the contractors or suppliers laboratory or by a qualified laboratory chosen by the owner. Once the materials are approved, no substitution will be permitted, unless first tested and approved by the laboratory preparing the mix design. The cost of mix design shall be born by the contractor.

4.2 Designing Job Mix

The qualified laboratory shall develop the job mix design and present certified test results for the contractor approval. Compatibility of the aggregate and modified CSS-1P shall be verified by the mix design. The mix design must be made using samples taken from the actual materials proposed for use in the project and in accordance with the procedures and requirements of Article 5.1 below.

5. PAVING MIXTURE

5.1 Mixture Design.

The mix shall be designed in accordance with Texas State Highway Department Bulletin C-14 and Test Method Tex-204-F, using Test Method Tex-227-F to supplement Test Method Tex-201-F and Tex-202-F to conform to the requirements herein. The above laboratory mixing and curing procedures may be modified as approved by the Engineer. The emulsified asphalt content will be selected by the Engineer to provide an optimum laboratory compacted density within the range of 94 to 97%. A minimum Hveem stability of 35 is required for placements exceeding a depth of twice the maximum aggregate size.

This is a mix design requirement, to be verified by testing of trial batch material prior to placement of project material. Hveem Stability testing will be performed by the selected laboratory. The Engineer will determine the frequency of job control density and stability testing. The Contractor shall furnish the mix design for the type of mixture specified together with applicable design worksheets and data. The Bulk Specified Gravity will be determined for each aggregate to be used in the design mixture. If the determined values vary by 0.300 or more, the mixture design will be by the Volumetric Method, Test Method Tex-204-F, Part II. To substantiate the design, trial mixtures will be produced and tested using all of the proposed project materials and equipment prior to any placement. The Engineer may waive trial mixtures if the same design has been proven to be in conformance with these requirements.

5.2 Composition of Mixture.

The Engineer shall approve the design mix and all micro-surfacing materials and methods prior to use and shall designate the proportions to be used within the following limits.

Residual Asphalt	**6 to 9 percent by weight of dry aggregate or 13.5 to 23 percent by volume of the aggregate**
Mineral Filler	**0.5% to 3.0% by dry weight of aggregate**
Modifier	**As required to provide the specified properties**
Water	**As required to provide proper consistency**

5.3 Type

The paving mixture shall consist of a uniform mixture of coarse aggregate, fine aggregate and asphaltic material. The mix may also contain mineral filler and/or additives when required.

The mixture shall be designed so that the mineral aggregate will produce a gradation, which conforms to the limitations for the master grading for the type specified herein. The gradation will be determined in accordance with Test Method Tex-200-F (Dry Sieve Analysis) and shall be based upon aggregate only. The amount of asphaltic material shall conform to the limitation for the type specified.

The aggregate grade shall be as shown on the plans. If no grade is shown on the plan grade 2 aggregate shall be used.

5.4 Tolerances

The aggregate portion of the paving mixture produced shall not vary from the design gradation by more than the tolerances that follow. The material passing the No. 200 sieve is further restricted to conform to the limitations for the master grading for the type specified. The asphaltic material portion of the paving mixture shall not vary from the design amount by more than the allowed tolerance and is also restricted to conform to the master limits. The method of test for determining the aggregate gradation and asphalt content of the mixture shall be Test Method Tex-210-F or other methods of proven accuracy.

	Percent by Weight or Volume as Applicable
Passing 3/8" sieve, retained on No. 4 sieve	**Plus or minus 5**

Passing No. 4 sieve, retained on No. 8 sieve	**Plus or minus 5**
Total retained on No. 8 sieve	**Plus or minus 5**
Passing No. 8 sieve, retained on No. 16 sieve	**Plus or minus 3**
Passing No. 16 sieve, retained on No. 30 sieve	**Plus or minus 3**
Passing No. 30 sieve, retained on No. 50 sieve	**Plus or minus 3**
Passing No. 50 sieve, retained on No. 200 sieve	**Plus or minus 3**
Passing No. 200 sieve	**Plus or minus 2**

Asphaltic Material Plus or minus 0.5 by wt. or l.2 by vol.

6. EQUIPMENT

6.1 General.

All equipment for the handling of all materials and mixing and placing of the mixture shall be maintained in good repair and operating condition and subject to the approval of the Engineer. Any equipment found to be defective and potentially affecting the quality of the paving mixture will be replaced or, at the option of the Contractor, satisfactorily repaired. It will be the contractor responsibility to prove to the Engineer that the repaired equipment is properly functional.

6.2 Mixing and Proportioning Equipment.

(1.) The material shall be mixed by a self-propelled micro-surfacing mixing machine which shall be a continuous flow mixing unit able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, field control additive and water to a revolving multi-blade twin shafted mixer and discharge the mixed product on a continuous flow basis. The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, field control additive and water to maintain an adequate supply to the proportioning controls. The machine shall be equipped with self-loading devices, which provide for the loading of all materials while continuing to lay micro surfacing.

The machine shall be equipped with opposite side driving stations to optimize longitudinal alignment. The machine shall be equipped to allow the mix operator to have full hydrostatic control of the forward and reverse speed during application of the micro-surfacing material.

The self-loading devices, opposite side driving stations and forward and reverse speed controls shall be original equipment manufacturer design.

(2). Individual volume or weight controls for proportioning each material to be added to the mix shall be provided. Each material control device shall be calibrated and properly marked.

(3) The aggregate feed to the mixer shall be equipped with a revolution counter or similar device so the amount of aggregate used may be determined at any time.

(4) The emulsion pump shall be a positive displacement type and shall be equipped with a revolution counter or similar device so that the amount of emulsion used may be determined at any time.

(5.) The mixing machine shall be equipped with a water pressure system and nozzle type spray bar to provide a water spray immediately ahead of and outside the spreader box.

(6.) The mixing machine shall be equipped with an approved fines feeder that shall provide a uniform, positive, accurately metered, predetermined amount of the specified mineral filler.

6.3 Spreading Equipment.

The paving mixture shall be spread uniformly by means of a mechanical type spreader box attached to the mixer, equipped with paddles, screws or augers to agitate and spread the materials throughout the box. A front seal shall be provided to insure no loss of the mixture at the road contact surface. The rear seal shall act as a final strike off and shall be adjustable and shall break in the middle so that the screed can be adjusted to fit the crown of the street including inverted crowns. The rear seal carrier shall be capable of being fitted with a rubber seal or a steel strike off bar.

The spreading equipment shall be readily adjustable in width so that laying widths can be changed without undue delay before starting each pass if necessary.

The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The seam where two spreads join, shall be neat appearing and uniform.

7. STOCKPILING AND STORAGE.

7.1 Aggregate Storage.

If the mineral aggregates are stored or stockpiled, they shall be handled in such a manner as to prevent segregation, mixing of the various materials or sizes, and contamination with foreign materials. The grading of aggregates proposed for use and as supplied to the mixing plant shall be uniform. Suitable equipment of acceptable size shall be furnished by the Contractor to work the stockpiles and prevent segregation of the aggregates. The mineral aggregate shall be screened and weighed at the contractor stockpile prior to job site delivery. The Engineer shall approve screens and scales.

7.2 Storage and Heating of Asphaltic Materials.

The asphaltic material storage shall be ample to meet the requirements of the plant. Asphalt shall not be heated to a temperature in excess of that specified
in the Item "Asphalt's, Oils and Emulsions" Texas Highway Department 1982 Standard Specifications. All equipment used in the storage and handling of asphaltic material shall be kept in a clean condition at all times and shall be operated in such manner that there will be no contamination with foreign matter.

8. CONSTRUCTION METHODS

8.1 General

It shall be the responsibility of the Contractor to produce, transport, and place the specified paving mixture in accordance with these specifications and as approved by the Engineer.

8.2 Street Preparation

Prior to starting the micro-surfacing operation, streets designated to be surfaced shall be prepared in accordance with item 2-C-1 "Preparation of Asphaltic Concrete Surface for Overlay or Seal".

8.3 Weather Limitations.

The material shall be spread only when the atmospheric temperature is at least fifty (50 degrees) F and rising and the weather is not foggy or rainy. No material will be placed when the surface on which it is to be placed is below 50^{o} F.

8.4 Final Surface Preparation

Immediately before placing the micro-surface, the area to be sealed shall be thoroughly cleaned of all vegetation, loose aggregate and soil, and moistened. Water for prewetting the surface shall be applied immediately ahead of the spreader box by use of a pressure spray bar equipped with nozzles that produce a fine mist. The rate of application of water shall be sufficient to dampen the entire surface without any free flowing water ahead of the spreader box. The rate of the mist spray shall be adjusted from time to time during the placing operation to accommodate changes in temperature, surface texture, humidity and dryness of the pavement surface.

8.5 Placing the Mix

(1). The mixture shall be spread to fill cracks and minor surface irregularities and leave a uniform skid resistant application of aggregate and asphalt on the surface. The finished surface shall be neat in appearance without drag marks, excessive buildup or other detracting irregularities.

(2). The speed of operation of the surfacing equipment shall be controlled by the mixer operator at forward speeds between 85 and 225 feet per minute depending on conditions and appearance of the newly placed surface.

If transverse rippling occurs the speed of the equipment shall be reduced until the ripples disappear.

(3). The Engineer shall designate either rubber seal/screed or the steel strike off screed according to the Project requirements.

(4). The depth of mixture in the spreader box shall be carefully controlled to prevent transverse ridging and premature setup of material in the corners of the box and ahead of the screed. In general the depth of mixture in the box should be approximately to the mid point of the auger-agitator.

(5). Auxiliary equipment shall be kept in good working order and free of leaks. Any truck or transport used to bring materials on to the street being surfaced that develops leaks either of the material being transported or fuel and/or oil leaks will be removed from the job site and not allowed to return until it has been thoroughly repaired.

Scales and screens used at the contractors stockpile and storage site shall be kept in good working order.

(6). Spills of surfacing materials or fuel, oil or other detrimental substances on the street ahead of the surfacing operation shall be thoroughly removed before the surface is placed. This may required the operation to be shut down until the street has been cleaned.

(7). No excessive streaks shall be left in the finished surface. When such excessive streaking occurs, the operation shall be immediately stopped and corrective action is taken before resuming the operation.

8.6 Joints

(1). Longitudinal joints shall be placed on lane lines. On residential streets an eight-foot parking lane will be assumed with the centerline being the other lane line.

(2). All longitudinal and transverse joints shall be straight and neat in appearance without excessive build up or bare spots. Any irregularity shall be corrected immediately before the material has started to set up.

(3). The overlap at longitudinal joints shall not exceed 4 inches. When the overlapped pass is only partially set care shall be exercised to avoid skid marks. Any skid marks that occur shall be immediately corrected by removing any partially set material that has been displaced and placing fresh mix in the mark and shaping by use of Lutes, squeegees, hand drags, etc.

Overlapping of longitudinal joints shall not leave a visible build up. Any buildup shall be immediately removed by use of lutes, squeegees, hand drags, shovels or other approved means.

8.7 Mix Stability

The modified mixture shall posses sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading; it shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate.

8.8 Hand Work

Areas that cannot be reached with the mixing machine shall be surfaced using hand squeegees to provide complete and uniform coverage. The area to be hand-worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from handwork. The same type finish as applied by the spreader box shall be required. Handwork shall be completed during the machine applying process.

8.9 Lines

Care shall be taken to insure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance.

8.10 Work Force

The contractor shall maintain a work force of adequate size to accomplish the work as specified herein, including the loading and transporting of materials to the job site, the placing of the micro surface, the monitoring of joints and surface and the correction of any deficiencies that occur.

If, at any time, the Engineer or his representative determines that the work force is not adequate to perform all the tasks required for the proper completion of the micro surfacing, work on the project will be halted until adequate personnel are provided and/or modifications in procedure are implemented that will assure proper placement of the surfacing material.

8.11 Scratch or Level up course

A scratch or level up course will be required on certain streets as shown on the plans and/or as directed by the Engineer. This course shall be the same material as the polymer modified surface course and will be placed in the same manner except the spreader shall be equipped with a steel strike off screed. This screed shall be set to run as close to the pavement surface as practical.

The appearance of this course is not as critical as the final surface so long as any marks or blemishes that occur are not of such magnitude that they will affect the appearance of the final course.

8.12 Correction of Deficiencies and Blemishes

After the laydown work is completed and before final acceptance by the

Engineer, spot application of micro- surfacing material may be required to correct any deficiencies such as streaks, scuff marks, tire tracks, gaps, etc. to improve the ride quality and overall appearance. The spot application shall be performed with a full width spreader box when required.

9. QUALITY CONTROL

9.1 Materials

The contractor will permit the Engineer and/or the Independent laboratory to take samples of the aggregate and asphalt emulsion used in the project at the Engineers discretion. Gradation and sand equivalent tests may be run on the aggregate and residual asphalt content tests on the emulsion. Test results will be compared to specifications. Tests will be run at the expense of the owner. The owner must notify the contractor immediately if any test fails to meet the specifications.

9.2 Polymer Modified Micro-Surfacing

Samples of the material may be taken directly from the mixing unit(s). Consistency and residual asphalt content tests may be made on the samples and compared to the specifications. Tests will be run at the expense of the owner. The owner must notify the contractor immediately if any test fails to meet specifications.
The Engineer may use the recorders and measuring facilities of the unit to determine application rates, asphalt emulsion content, mineral filler and additive.

9.3 Non-Compliance

If any two successive tests fail on the stockpile material, the job shall be stopped. It is the responsibility of the contractor, at his own expense, to prove to the Engineer that the conditions have been corrected. If any two successive tests on the mix from the same machine fail, the use of the machine shall be suspended. It will be the responsibility of the contractor, at his own expense, to prove to the Engineer that the problems have been corrected and that the
machine is working properly.

10. CLEAN UP

10.1 Protecting and Cleaning Manholes and Valves

Prior to beginning the sealing operation the contractor shall locate all manhole covers and valve boxes in the area to be sealed. Placing one or

more layers of heavy craft paper or other suitable material over them shall protect manhole covers and valve boxes. The protective covering shall be secured in place so that it does not move or tear during the sealing operation. The contractor shall remove the protective covering and any seal material placed over manhole covers and valve boxes as soon as the seal has set sufficiently to prevent damage to the adjoining seal in the process. The edges around manhole covers and valve boxes shall be neat and smooth and shall conform to the shape and size of the manhole cover or valve box.

10.2 Streets

Clean up along streets shall be accomplished as the work progresses and any excess material that is raked onto or otherwise placed on adjoining concrete curb and gutter, valley gutters or fillet areas or on adjacent asphalt or concrete paving shall be removed before it breaks or sets up.

Before a section of street is opened to traffic all clean up work shall be completed on that section.

11. MEASUREMENT AND PAYMENT

11.1 General

Payment will be made for these items listed in the bid proposal only. All work, materials, labor and appurtenance required to complete the project as shown on the plans or called for in the specifications but not listed in the bid proposal shall be considered as incidental and no separate payment will be made. The cost of these incidentals must be included in the price bid for the various items listed in the bid proposal.

11.2 Measurements

(1). Measurement will be made of the actual number of tons of each type or grade of the Composite Polymer Modified Slurry Seal (Micro-Surface) complete in place. For this specification a ton is considered 2000 lbs. and the composite slurry seal mixture is defined as the asphalt,
aggregate and additives.

All materials shall be weighed on certified public scales or the contractor shall place a set of standard truck scales at a site approved by the Engineer. Scales shall conform to the requirements of the item "Weighing and measuring equipment" Texas Highway Department 1982 Standard Specifications.

(2). Aggregate - The quantity of aggregate used in the accepted portions of the work shall be measured by net ticket weight of each individual load of
aggregate shipped to the project from the approved job site scale.

The weight of mineral additive used shall be calculated and included in the total aggregate weight.

(3). Polymer Modified Asphalt Emulsion. The quantity of polymer modified asphalt emulsion in the accepted portion of the work shall be measured by tons of material based on the accepted load tickets issued from the manufacturer. At the completion of the project any unused emulsion shall be weighed back and that quantity deducted from the accepted asphalt emulsion quantity delivered.

11.3 Payment

Payment will be made for the number of tons of micro surface measured at the applicable unit price bid per ton of micro surface in the bid proposal. This payment shall be full and complete compensation for the complete in place micro surface.

08/07

P.V.C. PIPE CASINGS

1. SCOPE

   This item consists of furnishing and installing PVC pipe for casing for future water and electric lines at locations shown on the plans or as directed by the Engineer.

2. MATERIAL

   Pipe shall be ASTM D 1785 schedule 40 PVC pipe or ASTM D 2241 PVC SDR 32.5 pressure pipe. The ASTM designation and schedule or SDR shall be clearly marked on the outside of the pipe.

3. CONSTRUCTION

   Pipe shall be laid in straight alignment and grade in trenches as narrow as the diameter of the pipe can be laid. Pipe shall be placed after the sub grade is prepared but before base material is placed. Bedding under the pipe shall be a minimum of 2 inches in thickness and shall be carefully graded and leveled before pipe is placed. Joints shall be water tight. They may be solvent cement welded using approved materials, or may be made using a gasketed collars or push on gasketed bell and spigot. When collars are used care shall be exercised to assure that the collar is centered over the joint. All joints shall be made in accord with the manufacturer's recommendations. After pipe has been joined and inspected the pipe shall be encased in bedding/encasement material to a thickness of 3 inches above the pipe. Care shall be exercised to be sure the encasement material is worked in under the haunches of the pipe and compacted along the side of the pipe to assure adequate lateral support. The balance of the trench shall be back filled using cement stabilized backfill consisting of 2 sacks of Portland cement to 1 cubic yard of blow sand or crushed caliche mixed with sufficient water to form a stiff place able mixture that can be consolidated in the trench by rodding or vibrating. The back fill shall be "struck off" at the finished sub grade level using square point shovels or suitable screeds. The ends of the pipe shall be tightly plugged to prevent the entrance of water debris or other foreign material. These plugs shall be PVC or rubber stoppers designed to endure until the water lines and/ or electric lines are places.

4. MEASUREMENT AND PAYMENT

   Casing pipe shall be measured by the linear foot along the center of the pipe and shall be paid for at the unit price in the bid proposal.

WATER LINE SPECIFICATIONS

1. SCOPE OF WORK

The work covered by this section consists of all water pipe lines and piping, including valves, valve boxes, tapping sleeves, fire hydrants and other accessories, required to complete the project. The contractor shall furnish all materials, labor, superintendence, tools, equipment and incidentals necessary for the complete construction of this work in accordance with the drawings and these specifications.

2. PIPE AND MATERIAL

2.1 General

Pipe shall be polyvinyl chloride (PVC) AWWA C900, ductile iron AWWA C-151 or steel cylinder concrete pipe AWWA C-303.

2.2 Polyvinyl Chloride (PVC) Pipe

A. PVC pipe furnished for use on this project shall conform to the requirements of AWWA C900 Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. through 12 in., for water distribution pressure class 150, DR18. and shall be NSF approved for potable water supply.

B. The pipe furnished shall have an integral bell designed for joint assembly using elastomeric seals.

C. Markings for the pipe shall include all the requirements of AWWA C900 and the MSF approval stamp.

D. Elastomeric seals shall be furnished by the pipe manufacturer. Seals shall be manufactured to conform with the requirements of ASTM F4 77 and shall be specifically designed for use with the pipe furnished.

E. Lubricants intended for use with PVC pipe and seals (gaskets) shall be compatible with both PVC and the seal material. Lubricant shall not support growth of bacteria and shall not adversely affect the potable quality of the water that is to be transported.

F. Pipe laying lengths shall be 20'.

G. Service taps on PVC water lines shall be made using hinged type or double strap type saddles. Tapping saddles shall support the full circumference of the pipe and shall have a bearing area of sufficient width along the axis of the pipe to prevent distortion of the pipe when saddle is tightened.

No direct taps into the wall of PVC pipe will be permitted.

Seals for tapping saddles shall be recessed into the body of the saddle and shall be

a rubber - compound conforming to the requirements of ASTM F477.

Tapping saddles shall be SMITH-BLAIR Taper Seal Style 313 or DMD Dresser style 194 or approved equal.

H. Tapped connections for water mains and fire lines made on PVC water mains shall be accomplished using full bodied ductile iron tapping sleeves of a pressure rating equal to or greater than the pressure rating of the pipe specified.

I. Bedding for AWWA C900 PVC water pipe shall extend from a minimum depth of 4 inches below the outside of the water line to a minimum cover of 6 inches over the top outside of the water line.

J. AWWA C900 PVC water pipe shall be installed in accord with the applicable requirements for installing ductile iron pipe.

Care shall be taken to install each joint of PVC water pipe to, but not beyond the factory insertion mark on the pipe.

When a joint of PVC water pipe must be cut, the end of the pipe shall be carefully beveled to match the factory bevel on the uncut pipe. An insertion mark matching the factory insertion mark on the uncut pipe must be made before the pipe is inserted into the bell.

When PVC water pipe is to be inserted into a ductile iron fitting or valve, the factory bevel must be removed to form a square plain end pipe.

2.2 (a) Metallic Marking Tape (For PVC Water Pipe)

2.2(a).1 General

When non-metallic pipelines are to be installed, then the Contractor shall furnish and lay, above the pipeline, a continuous strip of metallic identification tape.

2.2 (a).2 Tape Material

The metallic identification tape shall be at least two inches (2”) in width and shall be of corrosive resistant metal of sufficient thickness to be stable and reflect electronic signals to electronic pipeline detector when buried to a dept of twenty-four (24”) below normal ground level.

The metallic tape shall be painted blue on one side and shall have 1-inch high letters painted continuously on the same side of the tape which read, “CAUTION: BURIED WATER LINE BELOW” or other words to this effect.

The marking tape shall be “Detectable Warning Tape”, as manufactured by the Omega Marking Company, or equal approved by the Engineer.

2.2(a).3 Construction Methods

The Contractor shall backfill over non-metallic pipelines to a depth which is less than twenty-four (24”) and not more than twelve inches (12) from the top of the cut of the ditch section in which the pipeline is laid. Contractor shall stop the backfilling material to a generally uniform level. All machine tamping, jetting and other compaction activities shall be accomplished up to this point of height in the backfilling the marking tape is placed in the trench.

The Contractor shall then lay the marking tape in the pipe trench and shall be held in position by the spot placement of backfill materials over it to keep it from sliding t the sides and/or from being blown about in the ditch by the wind. The tape shall be lid with the painted side, which shall also be the side with the identification lettering on it, in the “up” position. The tape shall be laid in the flat position and kept there until backfill is accomplished.

The Contractor shall then complete the backfilling operation in such a manner that the marking tape is not cut, crimped, ruptured or separated by the backfilling work.

2.2(a).4 Measurement and Payment

No separate pay item will be provided for furnish and placing the marking tape. This item shall be considered subsidiary to the non-metallic pipe being placed.

2.3 Ductile Iron Pipe

A. All ductile iron pipe used in the construction of water works improvements shall be Cement Lined and shall be manufactured in accordance with and shall meet the requirements of AWWA Specification C-l5l.

B. Pipe shall be cast in lengths of not less than l2 feet and shall be designed for a working pressure of l50 pounds per square inch. Thickness of ductile iron pipe shall be as shown on the plans and bid proposal or shall be computed in accordance with AWWA Specification C-l50, based on l50 pounds per square inch working pressure for 10 feet of cover and laying condition 2.

C. All ductile iron pipe shall have an exterior, bituminous coating and an inside cement-mortar lining in accordance with the requirements of AWWA Specification C-l04.

2.4 Polyethylene Plastic Tubing

Service lines shall be constructed with polyethylene plastic tubing as specified in ASTM D 2737 with a rating of l60 psi.

2.5 Ductile Iron Pipe Fittings

All fittings for ductile iron pipe and PVC pipe shall be ductile iron and shall be mechanical joint all connections except tees for fire hydrant leads unless shown otherwise on the plans. Tees for connecting fire hydrant leads shall be MJ- with a flange outlet.

All ductile iron fittings shall conform to AWWA Specification C-110, designed for a working pressure of 250 psi. All ductile iron fittings shall have an external coating and shall be cement lined in accordance with the specifications for coating and lining the pipe.

2.6 Pretensioned Concrete Cylinder Pipe

A. The contractor shall furnish and install all concrete cylinder pipe and fittings, including connections and appurtenances complete as shown on the plans and specified herein.

B. The contractor shall submit six (6) sets of full and complete shop drawings on the concrete cylinder pipe and fittings. All of the drawings and data shall be complete and shall include a complete description of the pipe offered, including cuts, tabulated layout and all pertinent engineering data required for a complete evaluation of the submittal. Submittal data shall be in such form and so presented that the Engineer may readily review the data.

C. Prior to delivery of the pipe to the project site, the manufacturer shall furnish an affidavit certifying that all pipe, fittings, and specials, and other products and materials furnished, comply with the applicable provisions of this specification.

D. The pipe manufacturer shall furnish a factory trained, job experienced field representative who shall visit the project periodically during the course of installation. He shall also be subject to call by the contractor and/or engineer to advise and assist with the solution of field problems.

During visits, the representative shall observe all phases of the project including location and condition of pipe strung ahead of the contractor, trench width, if applicable, bedding and backfill, assembly of pipe joints and protection of steel. If, in the opinion of the representative any phase of the installation is unsatisfactory, he shall so advise the contractor's superintendent and also advise the owner or engineer's representative on the job site.

E. All closure sections shall be the jack on type and "field welding" will not be permitted without the written permission of the engineer.

F. Pipe manufacturer will install all necessary taps for the contractor to disinfect and field hydrostatic test the pipe.

G. Pretensioned concrete cylinder pipe, fittings and specials shall be designed, fabricated and tested in accordance with the latest requirements of AWWA C-303, "Reinforced Concrete Pressure Pipe Steel Cylinder Type, Pretensioned, for Water and Other Liquids" with additional requirements or modifications as described herein.

H. Pretensioned concrete cylinder pressure pipe shall be designed for l50 psi, working pressure and manufactured in 32 foot nominal lengths in accordance with the provisions of AWWA Standard C-303.

I. Inspection and Testing

(1) The owner reserves the option to have an independent testing laboratory, at the owner's expense, inspect pipe and fittings at the pipe manufacturer's plant to ensure compliance with the applicable specifications. The owner's testing laboratory and Engineer shall have free access to those parts of the manufacturer's plant that are necessary to ensure compliance with the governing standard. The pipe manufacturer shall notify the owner, in writing, at least two weeks ahead of pipe fabrication as to start of fabrication and fabricating schedule so that the owner can advise the manufacturer as to owners' decision regarding tests to be performed by an independent testing laboratory. In event the owner elects to retain an independent testing laboratory to make material tests and weld test, it is the intent that the tests be limited to one spot testing of each category unless the tests do not show compliance with the standard. If these tests do not show compliance, the owner reserves the right to have the laboratory make additional tests and observations to ensure compliance of the finished product with the standard.

(2) In any event, the manufacturer shall perform the tests described in AWWA C 303, and furnish the owner with a copy of the test reports, if requested, at the expense of the pipe manufacturer. The pipe manufacturer shall furnish the owner with affidavit of compliance as outlined in the standard.

(3) All welds for water tightness in special pipe and fittings that have not been hydrostatically tested may be examined by use of visible dye penetrant system meeting requirement of ASTM El65; however, collar reinforcement and all other lap welds shall be tested by introducing air under l0 psi pressure between the collar and cylinder and checking for leaks around and through the welds with soap solution.

The area to receive the dye penetrant shall be cleaned free from contaminants that might interfere with the penetrant process. The temperature of the steel in the weld area shall be between 60 and l25 degrees F. when the penetrant is applied. Dwell time of six hours shall be allowed after application of the penetrant and developer before interpreting the results.

Defects that are found shall be repaired and the test repeated until all defects

are eliminated. Colored penetrant shall be removed before fittings are lined.

2.7 Casing Pipe

Casing pipe to be installed in bore or open cut may be limited service pipe, corrugated galvanized steel pipe or new straight seam or spiral welded steel pipe. Casing pipe shall be furnished in thickness or gage as shown on the plans.

Limited service pipe proposed for use on this project must be approved a minimum of four (4) working days prior to the time of opening bids and shall be in good condition and shall meet the same service requirements as the corrugated galvanized steel or welded steel pipe.

Welded steel casing pipe shall be coated inside and out using a coal tar epoxy or shall be bituminous coated in side and out by the hot dip method.

2.8 Bedding Materials

A. All water pipelines placed on this project shall be bedded with crushed stone bedding materials to the minimum as shown on the plans and in the Detail Drawings.

B. Granular material furnished for foundation, bedding, encasement, backfill, or other purposes as may be specified, shall consist of any natural or synthetic mineral aggregate such as, crushed gravel, crushed rock, crushed stone, or slag, and shall conform to the following specifications and/or gradation.

Note, all materials used for these purposes shall be crushed and shall have at least two broken faces. Pea gravel will NOT be allowed.

	Foundation	Bedding	Encasement	Backfill
ASTM c33 Grade #57	X			
ASTM C33 Grade #67	X			
ASTM C33 Grade #8		X	X	
THD 1982 ITEM 302 Type "D" Grade #4		X	X	
THD 1982 Item 302 Type "D" Grade #5			X	
Crusher Fines**			*X	X

* 100 percent of crusher fines that are to be used within 12 inches of the top of pipe must pass the 3/4" sieve.

** Approximate Gradation for Crusher Fines

Sieve Size	% Passing
2 inch	100
#4	35 - 100
#10	20 - 100
#40	5 - 35
#200	4 - 10

Crushed stone material proposed as an alternate for use on this project and not meeting the above specifications must be approved in writing at least 48 hours prior to the time scheduled for opening bids.

C. Granular materials provided for Foundation, Bedding, Encasement, or backfill use as required by the contract, either as part of the pipe item work unit or as a separate contract item, shall be classified as to use in accordance with the following:

MATERIAL USE DESIGNATION	ZONE DESIGNATION
Granular Foundation	Placed below the bottom of pipe grade as replacement for unsuitable or unstable soils, to achieve better foundation support.
Granular Bedding	Placed below the midpoint of the pipe prior to pipe installation, to facilitate proper shaping and achieve uniform pipe support. Also for Class B Bedding where specified.
Granular Encasement	Placed below an elevation one half (6") foot above the top of pipe, after pipe installation, for protection of the pipe and to assure proper filling of voids and thorough consolidation of backfill.
Granular Backfill	Placed below the surface base course, if any, as the second stage of backfill, to minimize trench settlement and provide support for surface improvements.

In each case above, unless otherwise indicated, the lower limits of any particular zone shall be the top surface of the next lower course as constructed. The upper limits of each zone are established to define variable needs for material gradation and compaction or void content, taking into consideration the sequence of construction and other conditions. The material use and zone designations described above shall only serve to fulfill the objectives and shall not be construed to restrict the use of any particular material in other zones where the gradation requirements are met.

3. **VALVES AND VALVE BOXES**

3.1 General

A. Valves 4" through l2" shall be resilient seated gate valves with non-rising stems and shall open by turning to the left (counter clock wise).

B. Valves l4" and larger shall be resilient seated butterfly valves and have operators suitable for direct burial and shall open by turning to the left (counter clock wise).

All valves except valves for use in fire hydrant leads shall have mechanical joint ends unless shown otherwise on the plans. Valves for use in fire hydrant leads shall be flange by mechanical joint.

C. All valves and fire hydrants shall be spray coated with a two component thermal setting epoxy to cover all interior wetted ferrous surfaces. Finished coating shall have a minimum thickness of 4 mils. The coating shall conform to the coating section of these specifications.

D. All valves for buried service shall be equipped with 2" square AWWA operating nuts.

3.2 Gate Valves

A. Gate valves shall be iron body, resilient **wedge gate** and shall be in compliance with AWWA Standard C-509-80 or latest revision thereof and shall have the following design features:

B. All valves shall have a working pressure of 200 psi and shall be bottle tight tested at this pressure from both directions. The gate body shall also be hydrostatically tested at 400 psi. Zero leakage will be required in all tests. The body, bonnet, and stuffing box shall be flange together with ASTM A-307 Grade B bolts and nuts to insure repairability.

C. Stems shall be machined from modified manganese bronze rod with an integral forged thrust collar machined to size.

D. Stem seals shall be dual "O" ring type.

E. Valve discs shall be rubber encapsulated or have disc seat rings molded of natural rubber, internally steel reinforced retained to the disc by self-locking type 304 stainless steel screws. Valve gates shall seat against a machined epoxy coated mating surface in the body of the valve.

F. All internal ferrous metal surfaces (machined or cast) shall be factory spray coated with a two component thermosetting epoxy to a nominal thickness of 4 mils and the exterior shall be coated with asphalt varnish as specified for coating of the pipe. (See Sec. 3.4 of these specifications for epoxy coating).

G. Valves shall be Mueller A-**2360** or Dresser-M&H **4067** or approved equal. Any alternate (approved equal) to these specifications **shall have completely interchangeable parts with either of the specified valves.**

3.3 Butterfly Valves

A. General - All butterfly valves shall be of the rubber seated tight-closing type. They shall meet or exceed AWWA Standard C-504, Class l50B. Both valve ends shall be mechanical-joint per AWWA Standard C-lll. Accessories (bolts, glands, and gaskets) shall be supplied by the valve manufacturer.

B. All valves must use full AWWA C-504 Class l50 B valve shaft diameter, and full Class l50 B underground service operator torque rating throughout entire travel, to provide capability for operation in emergency service.

C. Valve body shall be high strength cast iron ASTM A 126 Class B with l8-8 type 304 stainless steel body seat. Valve vane shall be high strength cast iron ASTM A 48 Class 40 or ASTM A 536, Grade 65-45-l2 ductile iron having rubber seat mechanically secured with an integral l8-8 stainless steel clamp ring and l8-8 stainless steel self locking screws.

D. Rubber seat shall be a full circle 360^{o} seat not penetrated by the valve shaft. Valve shall have permanently set two way thrust bearing. Packing shall be designed for permanent duty in underground service.

E. Valve operator shall be of the traveling nut type, sealed, gasketed and lubricated for underground service. It shall be capable of withstanding an overload input torque of 450 ft. lbs. at full open or closed position without damage to the valve or valve operator. It shall be designed to resist submergence in water to 25 ft. head pressure. Number of turns to operate valve shall be as listed below in order to closely resemble conventional distribution valve practices and to minimize water hammer:

Pipe and Valve Size	Turns to close	Pipe and Valve Size	Turns to Close
4" - 6"	16-1/2	14" - 16"	48"
8"	24	18" - 20"	72
10" - 12"	36	24"	90

F. Valves shall be capable of easy closure by one man using standard valve key, even under emergency line-break conditions as severe as those that would - cause a valve maximum opening torque requirement of as much as two times AWWA Class l50 B.

G. All valves shall be tested bottle-tight at rated working pressure by the manufacturer as follows:

l4" up. . . . . l50 psi

In addition a hydrostatic test with vane partially open shall be given to the assembled valve as follow:

l4" up. . . . . 300 psi

H. Valve shafts shall be l8-8 type 304 stainless steel. Shaft bearings shall be of the self lubricating sleeve type.

I. Valve discs or vanes for valves 30" and larger shall be the flow through (bridge or truss) type.

J. Butterfly valves shall be Dresser-M&H Model "450", "4500" or "l450" or Mueller line seal III or approved equal. Alternates (approved equal) to these specifications must be approved in writing 48 hours prior to time bids are received.

3.4 Coating

A. The coating shall be a two part thermosetting epoxy protective coating and shall function as a physical, chemical and electrical barrier between the base metal to which it is applied and the surroundings.

B. The coating shall be non-toxic and shall not impart taste to water. The coating must be formulated from materials deemed acceptable per the FOOD AND DRUG ADMINISTRATION DOCUMENT TITLE 2l of the FEDERAL REGULATIONS ON FOOD ADDITIVES SECTION l2l.25l4 entitled, RESINS AND POLYMERIC COATINGS.

C. The coating shall have a satin finish and shall be suitable for field over coating and touchup with same coating material without sanding or special surface preparation, or application of heat in excess of room temperature.

D. The coating shall have a successful record of performance in valves, pipe or other allied equipment for a minimum of two years.

E. The coating adhesion to the substrate shall exceed cohesion of the coating film as demonstrated by the following test:

(1) Prepare test panel and apply coating per manufacturer's recommendation.

(2) After sample has properly cured per manufacturer's recommendation, scribe an "X" using a sharp knife or scalpel through the coating to the metal substrate.

(3) Then with the point of the knife at the juncture of two scribes, attempt to lift off coating. Coating should not lift off substrate or between coats readily, but should break up leaving coating material on the substrate of this damaged area.

(4) No disbandment of the film shall be noted as tested above after immersion in tap water for l500 hours at l00`F.

F. A falling sand abrasion test using ASTM D968 shall produce an abrasion coefficient of 25-30 liters/mil. As an alternative, a Taber Abrader Test should find 3.5 - 3.7 milligrams coating loss per l00 cycles when using a CSF l0 Wheel (l000 gram weight).

3.5 Valve Boxes

All valves to be used in buried service shall be enclosed in cast iron valve boxes. Care shall be taken to place and maintain the 2" square operating nut in the center of the valve box. The valve box shall be two piece cast iron suitable for use with PVC pipe box risers. The 6 inch diameter cover shall be marked " Water". The PVC riser pipe shall be furnished in lengths as required (minimum pipe cover 42") PVC pipe for valve box riser may be ASTM C-900, ASTM D1785 schedule 40, ASTM D2241 pressure class 125 or ASTM D3034 DR 35. Valve boxes shall have a concrete ring 8" thick and having a radius equal to the radius of the valve box plus one foot (1') cast around them. Valve boxes placed in unpaved areas shall be set level with or slightly higher than the finished ground elevation. Valve boxes set in paved areas shall match the finished pavement surface.

3.6 Fire Hydrants

A. Fire hydrants shall conform to the requirements of AWWA C 502 dry barrel type. The fire hydrants shall be designed for a depth of bury of 4.5 feet, however the depth of bury may vary according to field conditions and extensions or shorter bury depth may be required.

B. The hydrants shall have a 5-l/4 inch valve opening, two 2-l/2 inch hose nozzles and one 4-l/2 inch pumper nozzle.

C. Hose threads shall be National Standard threads.

D. The hydrants shall be sized for 6-inch mains and shall have an inlet connection compatible with the type pipe used. All gaskets, nuts, bolts and other jointing materials shall be considered part of the fire hydrant installation.

E. Operating nut shall be standard l-l/2 inch pentagon opening counter-clockwise. The hydrant shall close with the pressure.

F. Hydrants shall be painted Federal Safety Yellow.

G. Fire hydrants shall have all interior wetted ferrous surfaces epoxy coated as required in the general and coating section of this item.

H. The hydrants shall have a minimum of two (2) drain holes located on opposite sides of the hydrant. The entire drainage channel must be made of non-corrosive material and sealed by acceptable resilient material (metal and/or leather seals are not acceptable).

I. The hydrants shall have a breakable safety flange and breakable stem coupling which breaks cleanly upon impact.

J. The hydrants shall be AWWA improved type hydrants and shall have self-oiling reservoirs.

K. Fire hydrants shall be the Mueller Centurion, the Dresser -M & H 929 Reliant, or The American Darling.

4. EXCAVATION, TRENCHING BEDDING AND BACKFILLING

4.l Trenching

A. The trench shall be excavated to the lines and grades as established by the engineer and as shown on the plans. The depth of cover for all main lines on which the grades and elevations are not shown on the plans, shall in general be Forty-two (42) inches. The amount of cover may vary over or under 42 inches as directed by the engineer but in no case will the amount of cover be less than thirty-six (36) inches. Depth of cover for service lines shall be as shown on the detail drawings.

B. Water lines constructed in proposed streets and service drives shall have the depth of cover measured from the finished grade. The contractor is hereby cautioned that proposed street finished grades are sometimes cut below the existing ground elevation.

C. The minimum width of the trench shall be the outside diameter of the pipe plus twelve (l2) inches for pipe diameter through l8", the outside diameter of the pipe plus eighteen (l8) inches for pipe diameters over l8". The trenching equipment shall be maintained on a sufficiently level road bed to provide substantially vertical trench walls. The maximum horizontal offset of the trench wall from bottom of trench to the top of the trench (under-cutting) shall be four (4) inches.

D. The trench shall be over excavated to an even grade to the depth of required bedding so that the bottom of the pipe will rest on a uniform thickness of bedding material on the bottom of trench throughout the entire length of the pipe. In order to obtain a true even grade, the bedding material shall be fine graded by hand. On lines that are to be laid to established grades batter boards shall be set at fifty foot intervals and the trench graded to the established grade.

E. Any part of the trench excavated below grade shall be corrected by filling with bedding material. The bedding material shall be thoroughly compacted.

E. If large rock, rock fragments or other unyielding materials are encountered in the bottom of the trench they shall be removed to a depth of six inches below grade, and the void filled with thoroughly compacted approved bedding material.

G. Bell holes of ample dimensions shall be dug at each joint to permit the jointing of pipe to be made properly and of sufficient depth to prevent the bell of the pipe from resting on undisturbed materials.

H. Wherever necessary to prevent caving, the trench shall be adequately braced and sheeted. Trench safety shall be in accordance with item l4 "Shoring and Sheeting of this specification.

I. Trench digging machinery may be used to make the trench excavations except in places where operation of same would cause damages to trees, buildings or other existing structures either above or below ground. In such instances hand trenching methods shall be employed.

J. All excavated material shall be stockpiled in a manner that will not endanger the work or existing structures and that will cause the least amount of obstructions to walks and driveways.

K. There will be no classification of the excavated materials and the term excavation shall include all materials encountered in excavating the trenches or structural excavations.

L. The contractor shall take all necessary precautions for protecting paved areas from being damaged by the trenching and backfilling equipment. Any damage done to any paved area, outside of the area set forth in the plans, as a result of the construction work shall be repaired by the contractor at his own expense.

M. Where the lines are located behind curbs, the contractor shall take special precautions to protect trees and shrubs. Care shall be exercised to cause as little damage to lawns as possible.

Where lines cross under curbs, gutters or curbs and gutters, tunneling will be required.

N. Blasting for excavation of solid rock will be permitted only after securing the

approval of the Director of Engineering and Transportation and the engineer and only when proper precautions are taken for protection of persons and property. The hours of blasting will be fixed by the engineer. Any damage caused by blasting shall be paid for by the contractor. The method or procedure relative to blasting shall conform to all state laws and local ordinances.

O. The contractor will be required to locate all known utility lines, including consumer service lines, far enough in advance of the trenching to make proper provisions for protecting the lines and to allow for any deviations that may be required from the established lines and grades.

P. The contractor shall not be allowed to disrupt the service on any utility lines except consumers service lines, which may be taken out of service for short periods of time, if the contractor obtains permission from the engineer and from the owner of the premises being served by the utility.

Q. The contractor shall immediately notify the proper utility company of any damage to utility lines, in order that service may be reestablished with the least possible delay. Repair of any damage to existing lines and the repair of consumer lines which are authorized to be cut or temporarily taken out of service shall be made by the contractor at his own expense, and as directed by an official representative of the utility company involved.

R. All utility lines shall be properly supported to prevent settlement or damage to the line both during and after construction.

S. Any permanent relocations of existing utility lines shall be done by the proper utility company without expense to the contractor.

4.2 Backfill General

A. All pipeline excavations shall be backfilled in a manner that will restore pre-existing conditions as the minimum requirement and fulfill all supplementary requirements indicated in the Plans and Specifications. The backfilling operations shall be started as soon as conditions will permit on each section of pipeline to provide continuity in subsequent operations and restore normal public service as soon as practicable on a section-by- section basis. All operations shall be pursued diligently, with proper and adequate equipment, to assure acceptable results.

B. Depositing of the backfill shall be done so the shock of falling material will not injure the structure. Grading over and around all parts of the work shall be done as directed by the Engineer.

C. Whenever soil types which are determined by the Inspector to be undesirable for backfill are excavated from the trench, such material shall be hauled away and deposited where directed by the Inspector at no additional compensation.

D. In the absence of special work item requirements the backfilling shall be accomplished with the use of suitable materials selected from the excavated

materials to the extent available and practical. Should the materials available from the trench section be unsuitable or insufficient, the required additional materials shall be furnished from outside sources at the Owners expense.

E. Suitable material shall be defined as a mineral soil reasonable free of foreign materials (rubbish, debris, etc.) frozen clumps, oversize stone, rock, concrete or bituminous chunks and other unsuitable materials, that may damage the pipe installation, prevent thorough compaction, or increase the risks of after settlement unnecessarily. Material selection shall be such as to make the best and fullest utilization of what is available, taking into consideration particular needs of different backfill zones. Material containing stone, rock, or chunks of any sort shall only be utilized where and to the extent there will be no detrimental effects.

F. Backfill materials shall be carefully placed in relatively uniform depth layers spread over the full width and length of the trench section in a manner and/or sequence that will provide simultaneous support on both sides of the pipeline. Each layer shall be compacted effectively, by approved mechanical of hand methods, until there is no further visual evidence of increased consolidation. Compaction of the in place layer shall be completed acceptably before placing material for a succeeding layer thereon. The manner of placement, layer thickness, compaction equipment, and procedure effectiveness shall be subject to approval of the Engineer. Water jetting or flooding shall NOT be used to compact trench backfill.

G. Within the pipe bedding and encasement zones described as that portion of the trench which is below an elevation one foot above the top of the pipe, the materials placed shall be limited in particular size to 3/4 inch maximum. For larger pipe in access of 18 inches in diameter the Engineer may allow particle sizes up to 2 inches maximum if it can be shown that the backfill can be satisfactorily compacted without leaving voids or damaging pipe or joints. Above these zones, the placement of material containing stones, boulders, chunks, etc. shall be governed by the layer thickness and compaction equipment capabilities.

H. Compaction of materials placed within the pipe bedding and encasement zones shall be accomplished with portable or hand equipment methods to achieve thorough consolidation under and around the pipe and avoid damage to the pipe. Above the pipe zone material, the use of heavy roller type compaction equipment shall be limited to safe pipe loading.

I. The maximum loose thickness of each backfill layer shall be l2 inches, except that l6 inches will be permitted for Granular Materials placed above an elevation one foot above the top of pipe, and with the provision that, by authority of the Engineer in consideration of the demonstrated capability of special type vibratory compactors, these maximums may be increased at his discretion. "Hydro tamps" or "vibra tamp: or other heavy vibrating equipment shall not be used until the backfill has reached a depth of four (4) feet above the top of the pipe.

J. All surplus or waste materials remaining after completion of the backfilling operations shall be disposed of in an acceptable manner within 24 hours after

completing the backfill work on each particular pipeline section. Disposal at any location within the project limits shall be as specified, or as approved by the Engineer; otherwise, disposal shall be accomplished outside the project limits at the Contractor's discretion. The backfilling and surplus or waste disposal operations shall be a part of the work required under the pipeline installation items, not as work that may be delayed until final cleanup.

K. Until final acceptance of the project, the Contractor shall assume full Responsibility and expense for all backfill settlement and shall refill and restore the work as directed to maintain an acceptable surface condition. All additional materials required shall be furnished without additional cost to the Owner.

4.3 Backfill Procedure above Pipe Zone, in Public Rights-of-way and other areas where settlement is important.

A. Backfill above the pipe zone shall be made using Portland cement stabilized backfill or crushed stone screening (crusher fines).

B. Backfill around structures such as manholes, junction boxes, transformer boxes and valve boxes shall be made using portland cement stabilized backfill material or crushed stone screening (crusher fines).

C. The minimum depth of stabilized backfill or crusher fines shall be twelve (12") inches.

When utilities are being constructed under existing paving, the stabilized backfill or crusher fines shall extend from top of the pipe zone to the top of the base course.

When utilities are being constructed under existing unpaved streets that are not scheduled for immediate pavement construction, the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the existing roadway surface.

When utilities are being constructed in new streets that are scheduled for immediate paving or in streets in a new subdivision for which a paving contract with the property developer has been approved the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the bottom edge of the eight (8") inches of subgrade, or, if the paving contractor has constructed a portion of the roadway prior to the construction of the utilities stabilized backfill shall extend to the top of the course the contractor has finished. In no case shall the backfill extend above the top of the base course.

If the final course of asphaltic concrete has been placed, the street or alley surface shall **NOT** be cut for utility installation.

In new streets where stabilized backfill is required only to the bottom of the subgrade course, the minimum depth of stabilized backfill may be reduced to six (6") inches in which case the maximum depth of the "pipe zone" shall be limited to six (6") inches above the top of the utility line or conduit.

D. Backfill Materials

(1) Portland cement stabilized backfill shall consist of caliche base material, blow sand or native soil stabilized by the addition of Portland cement. Crushed stone or concrete aggregate shall **NOT** be used.

The Contractor shall submit a mix design prepared by an approved Commercial Laboratory that will produce a minimum 7 day compressive strength of 150 psi. In no case shall the minimum cement content of the mix be less than 1 sack per cubic yard.

(2) Cement used in Portland cement stabilized backfill shall be Type I or Type II conforming to the requirements of ASTM Designation C150.

(3) Caliche used for Portland cement stabilized backfill shall be crushed material con-forming to Texas State Department of Highways and Transportation 1982Standard Specifications for Construction of Highways, Streets and Bridges Item 248 Type F, Grade 2.

(4) Blow sand used for Portland cement stabilized backfill shall be clean, free from organic matter, clay lumps, rock and other deleterious matter.

(5) Native soil used for Portland cement stabilized backfill shall be clean, free from clods and organic matter, and rock in excess of 2".

(6) Crushed stone screening (crusher fines) used for back fill shall be sharp grained particles of crushed stone conforming to the following gradation

Sieve Size	% Passing
2"	100
#4	35-100
#10	20-100
#40	5-35
#200	4-10

and may be the by product of crushing stone for other purposes or may be stone specifically crushed for use in backfill. Crusher fines not meeting these specifications may be approved for backfill upon demonstration that the desired results will be obtained.

E. Backfill Construction

(1) Portland cement stabilized caliche backfill or Portland cement stabilized native soil backfill may be constructed using either the "dry" method or the "wet" method.

(a) The dry method of stabilized backfill construction consists of dry mixing of the cement and caliche, sand or soil to produce a homogenous mixture then adding and mixing sufficient water for proper compaction and hydration of the cement. The water content of the mixture will be approximately one to two percent above the optimum moisture for soil compaction. The mixing may be accomplished by using batch mixers or on the job site by "blade Mixing" or other suitable method to produce the desired backfill material. The mixed material shall be placed in lifts of up to a maximum of 12 inches and compacted to ninety five (95%) modified proctor density by use of suitable compacting equipment.

(b) In the "wet" method of cement stabilized backfill construction, the materials shall be mixed in an approved concrete batching plant or mixer to the consistency of concrete and placed as concrete would be placed. The slump of the backfill material shall be such that all voids will be filled, approximately four (4") to six (6") inches. The backfill shall be consolidated by rodding or by the use of mechanical vibrators.

(c) The mix design used must be for the method of placement chosen.

(2) Portland cement stabilized blow sand backfill shall be mixed and placed by the "wet" method as described above.

(3) Crushed stone screening (crusher fines) shall be wetted uniformly throughout with sufficient moisture to assure proper compaction before being placed in the trench.

The moistened crushed stone screening (crusher fines) shall be placed in maximum lifts of twelve (12") inches and consolidated using vibratory type compaction equipment except when it has been demonstrated that the compaction equipment employed will adequately compact deeper lifts in which case the maximum depth of a lift shall be limited by the capabilities of the equipment used.

Tests to determine the compacted density of the backfill shall be ordered by the Engineer if in his opinion the compaction is not adequate. Test showing a minimum compacted density of 90% modified proctor will be deemed adequate compaction.

5. INSTALLATION OF DUCTILE IRON PIPE

5.1 Pipe Laying - General

A. All pipe and accessories shall be unloaded, handled, laid, jointed, tested for defects and for leakage and chlorinated in the manner herein specified.

B. The pipe, fittings, valves, and accessories shall be inspected upon delivery and during the progress of the work and any material found to be defective will be rejected by the engineer and the contractor shall remove such defective material from the site of the work.

C. The contractor shall be responsible for all material furnished by him and he shall replace at his own expense all such material that is found to be defective in manufacturer or has become damaged in handling after delivery.

D. All pipe, fittings, valves, and other accessories shall, unless otherwise directed, be unloaded at the point of delivery, hauled to and distributed at the site of the work by the contractor. Loading and unloading, of pipe and fittings shall be by hoisting or by sliding, or rolling on skidways in such a manner as to avoid shock or damage to the material. Under no circumstances shall pipe or fittings be dropped. Pipe handled on skidways must not be skidded or rolled against pipe already on the ground.

The pipe, fittings and accessories shall be placed along the site in such a manner as to be kept as free as possible from dirt, sand, mud, and other foreign matter.

E. All pipe shall be laid and maintained to the lines and grades shown on the plans
or as established on the ground by the engineer.

F. Wherever it is necessary to deflect pipe from a straight line either in a vertical or horizontal plane to avoid obstructions, to plumb valves and hydrants, or where vertical or horizontal curves are shown or permitted, the degree of deflection at each joint shall not exceed the maximum deflection recommended by the manufacturer of the particular kind of pipe being laid and the degree of deflection shall be approved by the engineer.

G. After the trench grade has been completed and all bell holes dug and the grade inspected, the pipes and accessories my be placed in the trench. All pipe, fittings, valves, and hydrants shall be carefully lowered into the trench piece by piece by means of derricks, ropes, or other suitable tools or equipment, in such a manner as to prevent damage to the material in any way. Under no circumstances shall pipe or accessories be dropped or dumped in the trench.

H. Before lowering into trench the pipe shall be again inspected for defects and the pipe while suspended shall be lightly hammered to detect cracks. Any defective, damaged or unsound pipe and materials shall be rejected.

I. All foreign matter or dirt shall be removed from the inside of the pipe and from all bells, spigots or parts of the pipe used in forming the joint, before the pipe is lowered into the trench, and it shall be kept clean by approved means during and after laying.

5.2 Laying and Jointing Ductile Iron Pipe

A. Unless otherwise directed, pipe shall be laid with bells facing in direction of laying; and for lines on appreciable slopes, bells shall, at the discretion of the engineer, face up grade. Cutting of pipe for inserting valves, fittings or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe or the cement lining.

B. The jointing shall be completed for all pipe laid each day. No open joints will be left in the trench overnight. At times when pipe laying is not in progress, the open ends of pipe shall be closed by approved means. No trench water shall be permitted to enter the pipe.

C. No pipe shall be laid in water, or when the trench conditions or weather is unsuitable for such work, except by written permission of the engineer.

D. Rubber Gasket joints for cast iron or ductile iron pressure pipe and fittings shall conform to AWWA Standard C-lll.

E. Before laying the pipes, all lumps, blisters and excess coal tar coating shall be removed from the bell and spigot ends of each pipe; the outside of the spigot and the inside of the bell shall be wire brushed and wiped clean and dry. Pipe ends shall be kept clean until joints are made.

F. The pipe and fittings shall be properly aligned and free to move in any direction while bolting, and the bolts shall be gradually tightened at a uniform rate around the entire flange.

G. Flange joints where used shall be bolted with flange bolts of best quality mild steel and of the size and length required by AWWA C-ll5: Bolts and nuts shall be provided with standard hexagonal heads. Gasket rings shall be used and shall be made of best quality rubber composition sheet packing one-eighth (l/8) inch thick, of a brand and quality approved by the engineer.

H. Standard plugs shall be inserted into the bells of all dead end pipes, tees, or crosses and spigot ends shall be capped. Plugs or caps shall be jointed to the pipe or fittings in the same manner used in joining the pipe.

6. SPECIFICATIONS FOR INSTALLING PRETENSIONED CONCRETE CYLINDER PIPE

6.l General

The applicable portions of the specifications for installing ductile iron pipe shall apply except as amended or supplemented herein.

6.2 Pipe Laying

A. Pipe and fittings shall be handled with care at all times to avoid damage. They shall be lifted by hoists or slide or rolled on skid-ways in such manner as to avoid shock. Under no circumstances shall they be dropped. Pipe must not be skidded or rolled against other pipe or object.

B. Just before making the joint, the bell and spigot rings shall be thoroughly cleaned by wire-brushing until clean and dry. The gasket and the inside surface of the bell shall be lubricated with a light film or soft vegetable soap compound (flax soap) to facilitate telescoping the joint. The rubber gasket shall be stretched uniformly as it is placed in the spigot groove to insure a uniform volume of rubber around the circumference of the groove.

C. The joint shall be telescoped by pulling directly along the centerline of the pipe so that the spigot enters squarely into the bell. After the spigot has been telescoped into the bell, the bell end of the pipe being laid shall be moved in accordance with the plans to secure proper grade and alignment. After the joint is in place, a thin metal feeler gauge shall be used to check the position of the rubber gasket around the circumference of the joint.

D. The inside joint recess shall be filled immediately prior to placing the pipe together by buttering the bell end with mortar. After the joint is engaged, the joint mortar of pipe l8" in diameter and larger shall be finished off smooth by hand. The mortar in pipe smaller than l8" in diameter shall be smoothed and cleaned with a swab.

E. After the spigot has been telescoped into the bell, the joint checked and found satisfactory, a canvas wrapper shall be placed around the pipe, covering the joint. The canvas type wrapper shall be of the quality manufactured by the Mar-Mac Manufacturing Company or approved equal burlap type, and shall be hemmed at each edge to allow threading with a steel strap to securely fasten the wrapper around the pipe by means of a stretcher and sealer.

The wrapper shall have a minimum width of 7" and sufficient length to encircle the pipe leaving enough space between the ends at the top to allow the cement mortar to be poured. The entire joint shall be poured with cement mortar and rodded or agitated to eliminate voids and settlement. Prior to pouring the cement mortar the joint shall be thoroughly cleaned and saturated with clean water. Any joint showing shrinkage or excessive cracking shall be cleaned and remade. In hot weather,

additional measures may be required to obtain the best quality of joint, such as additional wet burlap, curing membrane, or immediate careful and well controlled backfilling of the joint with damp earth.

F. The mortar used at the exterior joint shall consist of one part Portland cement to 2-l/2 parts fine, sharp, clean sand and mixed with water to the consistency of thick cream. Mortar required at the joint shall not be placed in freezing weather unless adequately protected from freezing.

G. The joints for pipe to be installed in casing shall be made as for pipe laid in trench except that the outside portion of the joint shall be wrapped in a special polyurethane wrap impregnated with unhydrated cement manufactured for this purpose, prior to being jacked into the casing pipe. The wrap shall be "Flex-Protex" as manufactured by Mar-Mag Mfg. Corporation or approved equal. The interior of the joints shall be mortared after the pipe to be installed in casing has been jacked into place. The pipe shall not be moved after interior mortaring is completed. After the water line has been installed in the casing the ends of the casing shall be sealed using concrete or cement mortar.

H. Steel cylinder reinforced concrete pipe shall not be pressure tested until it has been in place a minimum of l4 days.

I. The contractor shall fill the steel cylinder reinforced concrete pipe under slight pressure and allow approximately 24 hours for water absorption by concrete lining before performing pressure test.

7. SETTING VALVES, VALVE BOXES, FIRE HYDRANTS AND FITTINGS

7.1 General

Valves and fittings shall be set at the locations shown on the plans or at locations as established by the engineer, and shall be set and jointed to the pipe in the manner heretofore specified for pipe installation. All valves buried in the ground shall have a cast iron valve box set over the valve and set to grade. All valves shall be set vertical, unless otherwise specified, and shall be thoroughly inspected and checked for operation before installation.

7.2 Valve Boxes

Cast Iron valve boxes shall be firmly supported and maintained centered and plumb over the wrench nut of the valve, with box cover flush with the surface of the ground or street paving.

Valve boxes shall be supported by a ring of concrete as shown on the plans and Detail Drawings. This ring shall be Class "A" concrete having a minimum thickness of six (6") inches and shall extend a minimum of twelve (12") inches in all directions from the outside diameter of the valve box and shall be supported on thoroughly compacted backfill.

7.3 Setting Fire Hydrants

A. Fire hydrants shall be located at points shown on the plans, the exact location of the hydrant to be established by the engineer. All hydrants shall be set plumb, to the grade as established by the engineer, and shall have their nozzles parallel with and/or at right angles to the curb, with the pumper nozzle facing the curb. The hydrants shall be supported in such a manner as not to cause a strain on the fire hydrant lead or branch.

The bowl of the hydrant shall be well braced against unexcavated earth at the end of the trench with concrete blocking. The concrete blocking shall be placed so as not to interfere with the hydrant drains and so that the joints or flanges are accessible.

B. Each hydrant shall be connected to the main with a six (6) inch ductile iron branch controlled by an independent six (6) inch gate valve. Each hydrant shall be set upon a stone or concrete slab not less than four (4) inches thick and not less than one square foot of surface area. Where solid rock exists in the bottom of the trench and same is excavated to the proper depth to form a foundation for the hydrant, the slab of stone or concrete may be omitted.

C. There shall be placed around the base of the hydrant not less than seven (7) cubic feet of sound broken stone or clean gravel, or other suitable material to provide reservoir capacity so that the hydrant will completely drain when closed. The gravel or broken stone shall reach from the bottom of the trench to at least six (6) inches above the waste opening in the hydrant. Each hydrant shall be operated by the contractor to prove to the inspector that the drain hole has not been plugged with concrete or other material.

8. **ANCHORAGE OF BENDS, TEES AND PLUGS, ETC.**

Reaction or thrust blocking shall be applied to all pipe lines at all tees, plugs, caps, valves, fire hydrants, and at bends deflecting ll-1/4 degrees or more. Concrete shall be used for blocking the pipe and fittings. Concrete for thrust block shall have a minimum compressive strength of 3,000 psi and shall conform to Texas Highway Department Class "A" concrete. Before thrust blocking is placed the element to be blocked shall be carefully wrapped in polyethylene sheeting having a minimum thickness of 3 mils. The blocking shall be placed between solid ground and the fitting to be anchored; the area of bearing on pipe and on the ground in each instance shall be that required by the engineer. The blocking shall be so placed that the pipe and fitting joints will be accessible for repair.

9. DISINFECTION OF PIPE LINES

The contractor shall furnish all labor, equipment, and materials necessary to the disinfecting of the new pipe lines which shall be disinfected before being placed in service. The lines shall be disinfected by the application of a chlorinating agent. The chlorinating agent may be a liquid chlorine, liquid chlorine gas water mixture, or a calcium hypochlorite solution, which shall be fed into the lines through a suitable solution feed device, or other methods approved by the engineer. The chlorinating agent shall be readily dissolvable and of a type that will rapidly mix with the water as it is loaded into the water line. Tablets or other solid form shall not be used unless they are dissolved before being placed into the line. The chlorinating agent shall be applied at or near the point from which the line is being filled, and through a corporation stop or other approved connection inserted in the horizontal axis of the newly laid pipe. The water being used to fill the line shall be controlled to flow into the section to be disinfected very slowly, and the rate of application of the chlorinating agent shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the line shall be at least 50 parts per million. The treated water shall be retained in the pipe lines for a period of not less than twenty four (24) hours. At the end of the retention period all treated water shall be thoroughly flushed from the lines until the replacement water in the lines shall have a chlorine residual of not more than 0.2 parts per million. Where it is necessary to place the new lines in service in less than 24 hours, the concentration of chlorine may be increased to 300 ppm and the lines flushed and placed in service in 3 hours. Disinfecting procedures shall conform to AWWA C 60l.

l0. HYDROSTATIC TESTS

All pipe lines constructed under this contract before being accepted, shall be tested at l20% design pressure as described in the following paragraphs. This test shall apply to all newly laid pipe or any valved sections thereof.

The required test pressure (l80 pounds per square inch) shall be maintained over a continuous period of not less than eight (8) hours.

Each valved section of pipe shall be slowly filled with water, being certain that all air is expelled from the pipe by using hydrants, blow-offs or taps at points of highest elevation in the line. The specified pressure shall be applied by means of a pump and flow meter (gpm and amount) connected to the pipe in a manner satisfactory to the engineer. The contractor shall furnish all necessary equipment, materials and labor to satisfactorily make the hydrostatic tests.

After the line section to be tested has been brought to pressure, a visual inspection shall be made of all joints, fittings, valves, and appurtenance. Any leaks thus located shall be corrected before continuing with the test.

If the test indicates a leakage in excess of a rate equal to twenty-five (25) gallons per inch of nominal diameter of pipe line per mile per day (maximum 600 gallon per mile per day total leakage) the cause of such leaks shall be determined and corrected and the line retested until satisfactory results are obtained.

11. **REMOVING AND REPLACING PAVEMENT**

A. When it is necessary to cut existing paving to install utilities the paving shall be repaired as soon after the backfill is consolidated or the cement stabilized backfill has reached sufficient strength as practical. The repair shall be made using Texas Highway Department Type "D" Hot Mix Asphaltic Concrete and shall have a minimum thickness equal to the thickness of the existing surface.

B. Edges along the trenches and around pits shall be saw cut to remove damaged edges and/or surface. Saw cuts shall be straight and parallel to or at right angles to the street or alley center line in so far as practical. Meandering, zig-zag or notched saw lines will not be permitted. The saw cuts shall be such that a minimum of 6" of surface is removed beyond the edges of the trench.

C. The edges of the saw cut and surface of the backfill material shall be tack coated prior to the placing of hot mix asphaltic concrete. The tack coat shall be either RC-250 cut back asphalt or RS2h emulsified asphalt or approved equal. When emulsified asphalt is used for tack coat the asphaltic concrete shall not be placed until the break of the emulsion is complete and all free water has evaporated or has been removed.

D. After the tack coat is cured the hot mix asphaltic concrete shall be placed uniformly throughout the repair area. The edges of the repair shall be squared up and the hot mix asphaltic concrete thoroughly compacted. Any large aggregate that is separated from the mix during the leveling process shall be removed from the surface and disposed of off the project. Care shall be taken that none of the mix over laps the old paving. Any mix that has "scabbed" onto the paving shall be removed before the section is reopened to traffic.

Sufficient mix shall be placed so that the finished repair is from one eight (1/8") inch to one quarter (1/4") inch above the old paving surface to allow for further consolidation by traffic.

12. **TUNNELING UNDER UTILITY LINES, ETC**.

Where pipes, conduits or concrete curbs, gutters or other obstructions are encountered in the construction, the cost of tunneling under such obstructions shall be included as a part of the cost of the pipe line, or other pay items, complete in place.

13. **HIGHWAY CROSSING**

A. The City of Midland will obtain any required permits from the State Highway Department for installation of the water line along and across the highway right-of-way. It shall be the contractor's duty and responsibility to coordinate the time of making the crossing and the manner of handling traffic.

B. Installations of the casing pipe shall be accomplished by boring or open cut trench as indicated on the drawings and in accordance with the Texas Department of Transportation permit and requirements. Equipment used shall be of such size and capacity as to allow the placement of the casing to proceed in a safe and expeditions manner. Installation of the casing and the excavation and removal of the materials

within the casing shall proceed simultaneously.

The boring shall proceed from a pit provided for the boring equipment and workmen. Excavation and location of the pit shall be approved by the Engineer. Boring without the concurrent installation of the casing pipe will not be permitted. The use of water or other fluids in connection with the boring operation will be permitted only to the extent of lubricating cuttings. Jetting will not be permitted. Overcutting in excess of one inch shall be remedied by concrete pressure grouting the entire length of the installation. All joints for casing pipe installed in bore shall be welded. Care shall be taken to keep the casing pipe on the proper line and grade.

C. After the casing pipe has been installed and is accepted by the Engineer, the pipe shall be shoved through the casing. The pipe shall be pushed or pulled through the casing by exerting pressure on the barrel of the pipe and not on the bell, and shall be done in such a manner that the joint is always in compression during the shoving operation. Hardwood, or other suitable material skids shall be banded with stainless steel bands to each joint of pipe In accordance with the pipe manufacturers recommendation. The hardwood skids shall be of sufficient dimensions to allow the bell of the pipe to clear the casing pipe by at least one-half inch. The length of the skid shall be in accordance with the pipe manufacturers recommendations. A minimum of three bands shall be used to secure the skids to the pipe. The skids shall be such that the carrier pipe will be centered in the casing pipe. The design of skids and bonding techniques shall be submitted to the Engineer for approval prior to use.

In general waterline installation in the casing pipe shall conform to AWWA C 600-Section 6 requirements.

After completion of pipe installation in casing, the ends of the casing shall be sealed off by use of concrete grout. The minimum compressive strength of the grout shall be 2,000 psi in 28 days.

14. **SHORING & SHEETING**

14.1 Description

This item shall govern for the Trench Safety Systems required for the construction of all trench excavation to be utilized in the project and including all additional excavation and backfill necessitated by the safety system. A trench shall be defined as a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. The depth is five feet or more.

Trench Safety Systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, dewatering or diversion of water to provide adequate drainage.

l4.2 Construction Methods

Trench safety systems shall be accomplished in accordance with the detailed specifications set out in the provisions of Excavation, Trench, and Shoring, Federal Occupational Safety and Health Administration (OSHA) Standards, 29CFR, Part 1926, Subpart P, as amended, including Proposed Rules published in the Federal Register (Vol. 52, No. 72) on Tuesday, October 31, l989. The sections that are incorporated into these specifications by reference include Sections 1926-650 through 1926-652. Legislation that has been enacted by the Texas Legislature, being Tex. Rev. Civ. Stat. Ann. arts. 1015q, 2368a.6 (Vernon Supp. 1988) with regard to Trench Safety Systems, is hereby incorporated, by reference into these specifications.

A reproduction of the OSHA Publication 2226 is attached for the convenience of the Contractor. The City assumes no responsibility for the accuracy of the reproduction or that it reflects current law. The Contractor is responsible for obtaining a copy of this section of the Federal Register for his use.

If the contractor elects to use a trench protective system that, in the Proposed Rules, requires "Design by a qualified person or a qualified engineer," [For example see 1926.652(b) (3) and 1926.652(c) (4)], "a qualified person or qualified engineer" shall be a Professional Engineer registered in the State of Texas. The Contractor is responsible for obtaining boring and soil analysis as required for the planned design. The trench excavation is to be designed in conformance with OSHA standards and regulations.

14.3 Safety Program

The Contractor shall submit a safety program specifically for the construction of trench excavation. The trench safety program shall be in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

14.4 Inspection

The Contractor shall make daily inspections of the Trench Safety Systems to ensure that the systems meet OSHA requirements. Daily inspection is to be made by a "competent person" provided by the Contractor. If evidence of possible cave-ins, or slides, is apparent, all work in the trench shall cease until the necessary precautions have been taken by the Contractor to safeguard personnel entering the trench. It is the sole duty, responsibility and prerogative of the Contractor, not the owner or the Engineer, to determine the specific applicability of the designed trench safety systems to each field condition encountered on the project. The Contractor shall maintain a permanent record of daily inspections.

14.5. Safety Restrictions - work near high voltage lines

The following procedures will be followed regarding the subject item on this contract:

A. Warning signs painted yellow with black letters that are legible at twelve feet shall be placed inside and outside vehicles such as cranes, derricks, power shovels, drilling rigs, pile drivers, hoisting equipment or similar apparatus. The warning sign shall read as follows:

"WARNING - UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN SIX FEET OF HIGH VOLTAGE LINES."

B. All equipment except back hoes or dippers that may be operated within ten feet of high voltage lines shall have an insulating cage-type of guard about the boom or arm and insulator links on the lift hook connections.

C. When necessary to work within six feet of high voltage electric lines, notification shall be given the power company who will erect temporary mechanical barriers, de-energize the line, or raise or lower the line. The notifying department shall maintain an accurate log of all such calls to the Power Company, and shall record action taken in each case.

D. The Contractor is required to make arrangements with the Power Company for the temporary relocation or raising of high voltage lines at the Contractor's sole cost and expense.

l5. MEASUREMENT AND PAYMENT

l5.l General

The unit price or lump sum price bid on each item, as stated in the proposal, shall include furnishing all labor, superintendence, machinery, equipment, and materials necessary to complete the various items of work in accordance with the plans and specifications. Cost of work or materials shown on the plans and called for in the specifications and on which no separate payment is made shall be included in the bid price on the various pay items.

l5.2 Water Lines

A. Measurement

The length of pipe lines for the various sizes, classes and types to be paid for will be determined by measurement along the center lines of the pipe installed, measurement being made from the center of fitting to center of fitting or end of pipe, without any deduction for the length of intermediate fittings or valves including pipe installed in casing.

B. Payment

Furnishing and installing approved type pipe of the various sizes and classes shown on the plans or as required will be paid for at the unit price bid per linear foot for furnishing and installing the various sizes and classes of approved pipe complete in place. The unit price bid shall be complete compensation for furnishing and installing the pipe complete in place including all excavation, backfilling, testing and disinfection of lines and shall include any and all incidental work not otherwise included in the bid items or otherwise provided for in the specifications.

l5.3 Solid Rock Excavation

All excavation for pipe trenches shall be unclassified and no extra compensation will be made for solid rock excavation. The contractor is expected to make boring of his own and satisfy himself to the character of material which will be encountered.

l5.4 Gate Valves or Butterfly Valves

A. Measurement

Gate valves or butterfly valves will be counted in the field after installation by the size and type specified and actually installed.

B. Payment

The unit price bid for each type and size valve shall be complete compensation for furnishing and installing the valves, complete in place, including the furnishing and installation of cast iron valve boxes on all valves to the finished grade of the adjacent surface. All valves in paved areas shall be set to finish pavement grades

l5.5 Fire Hydrants

A. Measurement

Fire hydrants will be counted in the field after installation in accordance with the plans and specifications.

B. Payment

The unit price bid shall be complete compensation for furnishing and installing the fire hydrants, complete in place, each, including lead pipe the gravel drain, concrete blocking, extension or additional bury depth as required for a complete installation.

I5.6 Service Connections

A. Measurement

The number of service connections of the type and size specified to be paid for will be counted in the field after complete installation.

B. Payment

The unit price bid shall be complete compensation for furnishing and installing the service connections, complete in place, including the meter box and lid, service line, corporation stop, meter stop and incidentals required for a complete installation.

I5.7 Ductile Iron Fittings

A. Measurement

The weight of the various ductile iron fittings and specials were estimated by using the standard weights for cast iron fittings as established by the American Water Works Association or American Standard Association. Measurement of ductile iron fittings will be made by counting the actual number of fittings installed and multiplying the number of fittings by the catalog weights for those types of fittings actually installed. Allowance will be made for glands and bolts.

B. Payment

The ductile iron fittings or specials required in the construction of the various size pipe lines as shown on the plans or as required will be paid for at the unit price bid per ton for furnishing and installing the ductile iron fittings complete in place. The unit price shall also include all materials, excavation, backfilling, concrete blocking and other incidental work required for the complete installation.

I5.8 Steel Cylinder Concrete Pipe Fittings

A. Measurement

No separate measurement or count of fittings and specials for steel cylinder concrete pipe will be made.

B. Payment

No separate payment will be made for fittings or specials for steel cylinder concrete pipe used on this project, but the cost of same shall be included in the price bid per linear foot for the various classes and sizes of pipe in the bid proposal.

l5.9 Casing Pipe In Bored Hole Or Open Cut

A. Measurement

Measurement of the casing pipe, of the type and size specified, shall be made by the linear foot of casing installed complete in bored hole or installed complete in open cut.

B. Payment

The unit price bid per linear foot for casing in bored hole or for casing in open cut shall be complete compensation for furnishing and installing the casing, complete in place, including all pits, boring equipment, materials and labor required for a complete installation. Payment for carrier pipe installed in the casing will be made as stated under Waterlines above.

l5.l0 Paving Cut and Repair

A. Measurement

Measurement of paving cut and repair will be made by the square yard for replacing pavement of the type specified. The area of the pavement replaced shall be determined by actual measurements on the ground; however, measurement will be limited to areas within widths of cuts as shown on the plans unless additional widths are authorized by the engineer. Any pavement removed or damaged outside of the aforementioned limits shall be replaced as prescribed with these specifications, but will not be measured for payment.

B. Payment

The unit price bid, per square yard, shall be complete compensation for cutting and removing the pavement, and constructing the concrete base and surfacing of the type specified, all as specified herein and as shown on the plans.

15.ll Trench Safety Systems, Sheeting and Shoring

A. Measurement

Trench Safety Systems shall be measured by the linear foot along the centerline of trench including manholes and other line structures.

B. Payment

Payment for Trench Safety Systems, measured as prescribed above, shall be made at the unit price bid per linear foot of "Trench Safety Systems: Payment of all work prescribed under this item shall be full compensation for the Trench Safety Systems including all Engineering cost and any additional excavation and backfill required, for furnishing, placing, maintaining and removing all shoring, sheeting, or bracing; for dewatering or diversion of water; for all jacking and jack removal; and for all other labor, materials, tools, equipment and incidentals necessary to complete the work.

Revised 08/07

GRAVITY FLOW PIPE SEWERS AND FITTINGS FOR WASTE WATER AND STORM WATER

PART I – GENERAL

1.01 SCOPE

A. The work covered by this specification shall include the furnishing of all material, labor and equipment to construct, complete in place, all Gravity sewers including jointing, gaskets, fittings, castings, mortar, concrete, the placing of sewer pipe, and the construction of manholes and other appurtenance, all in accordance with the details shown on the plans and these specifications for the drainage of sanitary and/or storm sewage.

B. Sanitary and storm sewer lines constructed under these specifications shall be straight in grade and alignment between manholes. Manholes shall be constructed at any change in grade and at any change in alignment. In general manholes are to be constructed at 300 feet intervals or less with the maximum distance between manholes being 350 feet when approved by the Engineer.

1.02 QUALITY ASSURANCE

A. The Contractor, at the Engineer's request, shall furnish a certificate from the manufacturer of the pipe and fittings that the manufacturer is fully competent and capable of manufacturing sewer pipe, fittings, and accessories of the type, size and grade proposed for use in this project that are of uniform texture and strength that will fully comply with these specifications and have so manufactured this class of pipe in sufficient quantities to be certain that it will meet all normal field conditions of usage. The manufacturer must have adequate equipment and quality control facilities to be sure that each extrusion casting or run of pipe is uniform in texture, dimensions, and strength.

B. All PVC, HDPE, or plastic resin based pipe and fittings shall be covered during storage to protect them from excessive heat and direct sunlight.

C. All pipe and accessories shall be stored above ground and fully supported so that they will not bend or deflect excessively under their own weight.

D. Pipe in any way damaged or deformed during storage shall not be incorporated into this project, but at the direction of the Engineer, shall be permanently removed from the job site and project area.

1.03 TYPE OF PIPE

A. Pipe for sanitary sewers 15 inches in diameter and less shall be PVC. Pipe for storm drains 15 inches in diameter and less may be corrugated steel pipe when called for on the plans and in the bid proposal. Pipe 18 inches in diameter and larger shall be of the type shown on the plans and bid proposal.

B. The contractor may be allowed to bid a choice of two or more of the pipe materials when pipe 18 inches in diameter and larger are proposed for use on a project. When such choice is allowed the permissible choices will be clearly stated on the plans and/or bid proposal and a blank space will be provided for the contractor to write in the type of pipe proposed for use on the project. When such blank spaces are provided, the contractor must choose one of the permitted pipe materials as specified in part 2 “Materials” of these specifications and write in the type of pipe bid. Failure to write in the type of pipe bid may be reason to disqualify the bid. One or more types of pipe 18 inches in diameter and larger may be excluded from consideration on any given project by notes on the plans and/or the bid proposal.

PART 2 – MATERIALS

2.01 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS FOR SANITARY AND STORM SEWERS

A. GRAVITY SEWERS

(1) Pipe and fittings in nominal diameters from 4-inch through 15-inch shall be manufactured in accordance with ASTM D3034, “Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings” and pipe and fittings in diameter 18” through 36” shall be manufactured in accordance with ASTM F-679 or ASTM F-794, closed profile, subject to the modifications and limitations below.

B. MODIFICATIONS AND LIMITATIONS

(1) The concrete slab manhole tops shall be reinforced with number 4 steel reinforcing bars spaced at 12 inches on center each way. Additional diagonal bars shall be placed on 4 sides around the manway opening. The diagonal bars shall be number 4 rebar with a minimum length equal to the diameter of the manway opening plus 4 inches. The steel reinforcing mat shall be placed in the bottom of the slab with 1-1/2 inches protective covering.

(2) The term Dimension Ratio (DR) or standard dimension ratio (SDR) is the ratio of the average outside pipe diameter to the minimum wall thickness rounded to the nearest 0.5. The maximum DR for PVC sewer pipe shall be 35. PVC pipe sewers that will have less than 4 feet of cover shall be DR26.

(3) PVC pipe manufactured under ASTM F679 or F794 shall have a wall thickness that will meet or exceed the D.R. and stiffness specified herein. The minimum pipe stiffness for pipe having a DR of 26 shall be 115 psi. The minimum pipe stiffness for DR 35 pipe shall be 46 psi.

(4) Where DR 26 pipe is specified, all necessary fittings shall be the same as for SDR 35 PVC pipe.

(5) Minimum wall thickness for ASTM D-3034 PVC pipe shall be as follows:

Nominal Size (in.)	Min. Wall Thickness (in.)	
	DR 26	DR 35
4	0.162	0.120
6	0.241	0.180
8	0.323	0.240
10	0.404	0.300
12	0.481	0.360
15	0.588	0.437

The minimum wall thickness for PVC pipe meeting ASTM F-679 or F-794 requirements shall be the thickness as set forth in said ASTM specification that will meet or exceed the pipe stiffness and DR required.

(5) The identification markings as shown in Section 12 of ASTM 3034 shall note the specified DR of 26 where applicable.

(6) All pipe and fittings shall have the dimensions for inside diameter, outside diameter, etc. as shown in ASTM D3034 and/or ASTM F-679 except that the inside diameter DR 26 may be reduced by the added wall thickness.

(7) The pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions, or other injurious defects. The pipe shall be as uniform as commercially practical in color, opacity, density, and other physical properties.

(8) The Contractor shall provide wyes, tees, bends, adapters, and any other fittings called for in the specifications and/or shown on the plans or directed by the Engineer.

(9) The standard length of ASTM, D-3034 SDR 35 or SDR 26 PVC pipe under this specification shall be 20 feet with a minimum of 10 feet, except that all pipe used in service lines shall not exceed 10 feet in length unless otherwise approved by the Engineer. The standard laying length for ASTM F-679 PVC pipe shall be 13 feet. The Engineer must approve other laying lengths.

C. SEWER LATERALS AND CONNECTIONS

Pipe and fittings for service lines shall be the same material and thickness class as required for the main sewer. Schedule 40 PVC pipe may be used for 4” service lines when PVC pipe meeting requirements of ASTM 3034, SDR 35 is required.

D. JOINING SYSTEMS

(1) PIPE JOINTS

The pipe shall be joined with an integral bell, bell and spigot type rubber gasket joint. Each integral bell joint shall consist of a formed bell complete with a single rubber o-ring gasket. Gaskets shall be manufactured in accordance with ASTM F477 and shall be installed in accordance with the pipe manufacturer's instructions using all the necessary materials, lubricants and equipment recommended by the manufacturer.

For pipe 18" through 36" gaskets shall be factory installed and chemically bonded to the bell end of the pipe.

Lubricant shall be water soluble, non-toxic and have no deteriorating effects on gasket or pipe materials and shall not support the growth of bacteria. Lubricant shall be suitable for use at temperatures from 5^{o} to 120^{o} F (-15^{o} to 50^{o} C). Containers shall be labeled with the manufacturer's name and identified as PVC pipe joint lubricant. Each lubricant container shall have printed instructions for usage and joint assembly.

Field welded joints will not be allowed.

(2) FITTING JOINTS

All fittings shall utilize rubber gasket joints of the same type design and specifications as pipe joints.

(3) PIPE SPIGOT

The pipe spigot shall have a bevel and an insertion stop mark. The assembled joint shall be designed so the gasket shall be radially compressed to assure a positive water-tight seal for all installation conditions recommended by the manufacturer and under all combinations of production tolerances for the joint components. Each size joint shall be qualified to no leakage under various test conditions in conformance with ASTM Specification D-3212, "Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals."

E. INSPECTION AND TESTING

(1) INSPECTION REQUIREMENTS

Certification: as the basis of the acceptance of the material, the manufacturer will furnish a certificate of conformance to these specifications. The manufacturer will furnish other conformance certification in the form of affidavit of conformances, test results, and copies of test reports.

(2) PHYSICAL TEST REQUIREMENTS

For each 4,000 linear feet of pipe manufactured of each class and size of pipe, the following certified test data shall be required:

1. The basic dimensions shall be measured.
2. The allowable crush load (lbs/ft ^{2}) shall be calculated.
3. Impact resistance, fusion quality and ductility shall be tested.

F. MARKING AND DELIVERY

Each pipe shall be identified with the name of manufacturer, nominal size, cell classification, ASTM designation F794, Uni-Bell Plastic Pipe Association designation Uni-B-9, the pipe stiffness designation “PS-46 psi” and manufacturer’s date code.

1. MANHOLE CONNECTIONS

The Contractor shall provide smooth pieces of pipe for connecting sewer line into manholes. The Contractor shall be required to assist the manhole gasket supplier with the nominal outside diameter of these smooth pieces of pipe, as manufactured. There shall be only one plain end thickness for each diameter of pipe specified for the project.

2. DELIVERY

All pipe couplings and fittings shall be prepared for standard commercial shipment.

The pipe shall be inspected upon delivery to the job site for final acceptance. The contractor shall be responsible for all material furnished by him and he shall replace, at his own expense, all such material that is found to be defective in manufacture or which has become damaged in handling until final acceptance has been made. Pipe, which exhibits excessive ovalty or curvature, shall be rejected.

PVC pipe and fittings shall be covered during storage to protect them from excessive heat and direct sunlight.

All pipe and accessories shall be stored above ground and fully supported so as not to bend or deflect excessively under its own weight.

2.01(a) Metallic Marking Tape (For PVC Sewer Pipe)

2.01 (a).1 General

When non-metallic pipelines are to be installed, then the Contractor shall furnish and lay, above the pipeline, a continuous strip of metallic identification tape.

2.01 (a).2 Tape Material

The metallic identification tape shall be at least two inches (2”) in width and shall be of corrosive resistant metal of sufficient thickness to be stable and reflect electronic signals to electronic pipeline detector when buried to a dept of twenty-four (24”) below normal ground level.

The metallic tape shall be painted green on one side and shall have 1-inch high letters painted continuously on the same side of the tape which read, “CAUTION: BURIED SEWER LINE BELOW” or other words to this effect.

The marking tape shall be “Detectable Marking Tape”, as manufactured by the Omega Marking Company, or equal approved by the Engineer.

2.01(a).3 Construction Methods

The Contractor shall backfill over non-metallic pipelines to a depth which is less than twenty-four (24”) and not more than twelve inches (12) from the top of the cut of the ditch section in which the pipeline is laid. Contractor shall stop the backfilling material to a generally uniform level. All machine tamping, jetting and other compaction activities shall be accomplished up to this point of height in the backfilling the marking tape is placed in the trench.

The Contractor shall then lay the marking tape in the pipe trench and shall be held in position by the spot placement of backfill materials over it to keep it from sliding t the sides and/or from being blown about in the ditch by the wind. The tape shall be lid with the painted side, which shall also be the side with the identification lettering on it, in the “up” position. The tape shall be laid in the flat position and kept there until backfill is accomplished.

The Contractor shall then complete the backfilling operation in such a manner that the marking tape is not cut, crimped, ruptured or separated by the backfilling work.

2.01(a).4 Measurement and Payment

No separate pay item will be provided for furnish and placing the marking tape. This item shall be considered subsidiary to the non-metallic pipe being placed.

2.02 CORRUGATED STEEL PIPE (CSP) FOR STORM SEWERS AND CULVERTS ONLY

1. PIPE

A. STEEL SHEET STOCK

(1) Corrugated steel pipe shall be manufactured using galvanized steel sheet AASHTO M 218 or aluminized steel sheet AASHTO M 274.

(2) The lining for smooth lined corrugated steel pipe shall be polymer coated on both sides. The minimum thickness of the polymer coating shall be 10 mils.

B. PIPE DESIGNATION

(1) Pipe furnished shall be manufactured in accordance with AASHTO Specification M 36.

(2) Corrugated steel pipe shall be one or more of the following type as designated in AASHTO M 36.

Type I - Full circular cross section having helical corrugations.

Type IA - Full circular smooth lined pipe constructed of an outer shell having helical corrugations with a smooth sheet lining attached to the outer shell at helical lock seams.

Type IR - Full circular cross section with helical rib protruding outward.

Type II - Type I pipe formed into a pipe arch.

Type IIA - Type IA pipe formed into a pipe arch.

The type of pipe furnished on this project will be as shown on the plans and in the bid proposal.

When no type of pipe is called for on the plans or in the bid proposal helically corrugated circular single wall pipe (Type I or Type IR) shall be furnished.

C. MANUFACTURERS CERTIFICATION

(1) The pipe manufacturer will be required to certify the adequacy of the pipe furnished for the application and design life of the project.

(2) The design life for storm sewers constructed under this specification is 50 years.

(3) The pipe manufacturer will be required to run soil pH, soil resistivity and such other test as they deem necessary to design pipe thickness and protective coatings required to assure the adequacy of the pipe supplied.

D. CORRUGATION AND MINIMUM THICKNESS

(1) Thickness used in this specification refers to the bare steel thickness before coating is applied. The minimum thickness for any single wall corrugated steel pipe furnished under this specification is 16 gage.

(2) All corrugated steel pipe furnished under these specifications shall have helical corrugations.

(3) Circular corrugated steel pipe 48” in diameter and smaller shall have 2-2/3” x ½” corrugation and shall be a minimum of 16 gage in thickness.

Circular corrugated steel pipe larger than 48” in diameter may have either 2-2/3 x ½” or 3” x 1” corrugations. The minimum thickness for corrugated steel pipe larger than 48” in diameter and having 2-2/3 x ½” corrugation shall be as follows:

54” Diameter - 12 gage
60” Diameter - 10 gage
66” through 90” Diameter - 8 gage

The minimum thickness for circular corrugated steel pipe having 3” x 1” corrugation and diameters of 54” through 90” shall be 14 gage.

(4) For smooth lined corrugated steel pipe the minimum thickness for the lining shall be 20 gage and the minimum thickness for the outer shell shall be 18 gage.

The corrugations for the outer shell shall be 2-2/3” x ½” for pipe 48” diameter and smaller. Larger diameter pipe may use 3” x 1” corrugations in the outer shell. The sum of the thickness for the outer shell and the liner shall be a minimum of one thickness unit greater than the thickness that would be required for single wall pipe of the same diameter or span.

(5) Spiral rib steel pipe (Type IR) shall have outward projecting spiral corrugations of ¾” x 1” at 11-1/2” on center in accord with AASHTO specification M 36 or ¾” x ¾” at 7-1/2” on center as described in AASHTO specification M 196.

The minimum thickness for spiral rib pipe 48” in diameter and smaller shall be 16 gage.

The minimum thickness for spiral rib pipe 54” and 60” in diameter shall be 14 gage.

The minimum thickness for spiral rib pipe 66” and 72” in diameter shall be 12 gage.

The minimum thickness for spiral rib pipe larger than 72” in diameter shall be as shown on the plans.

(6) The corrugations and minimum thickness of corrugated steel pipe arch shall be in accord with the following table:

EQUIV. Dia. (in.)	2-2/3" x ½" Corrugations Span (in.)	Rise (in.)	Gage	3" x 1" Nominal Size Span (in.)	Rise (in.)	Gage
15"	17	13	14			
18"	21	15	14			
24"	28	20	14			
30"	35	24	14			
36"	42	29	14	40	31	16
42"	49	33	12	40	36	14
48"	57	38	10	53	41	12
54"	64	43	10	60	46	12
60"	71	47	8	66	51	12
66"	77	52	8	73	55	12
72"	83	57	8	81	59	12
78"				87	63	12
84"				95	67	12
90"				103	71	12

When 2-2/3" x ½" corrugations are called for on the plans and/or on the bid schedule the substitution of 3" x 1" corrugations will be allowed only upon the demonstration by the contractor that there is sufficient head room to accommodate the higher rise for arch pipe of this cross section.

E. END TREATMENT AND JOINING

(1) The ends of all corrugated steel pipe furnished for this project shall be rolled to provide circumferential corrugations for coupling. The end corrugations for all pipe 48" in diameter and less shall be 2-2/3 x ½". The end corrugations for single wall helically corrugated steel pipe or for smooth lined corrugated steel pipe 54" in diameter and larger shall be the same pitch as the pipe furnished and may be either 2-2/3" x ½" or 3" x 1". The end corrugations for spiral rib (Type IR) corrugated steel pipe shall be 2-2/3" x ½" or 3" x 1" for pipe 54" and larger in diameter.

(2) Coupling bands shall be made of the same material as the pipe and shall be not more than 3 nominal sheet thicknesses lighter than the pipe joined and in no case less than .052 inch.

Jointing devices for joining corrugated steel pipe shall have a gasket and shall produce a joint meeting the infiltration/exfiltration requirements of these specifications.

If it should be necessary to cut a joint of Helically corrugated pipe and join the unreformed end to another section of pipe or fitting extra width bands will be required and special care must be taken to insure a water tight connection.

Locking bands shall be corrugated and shall securely fit into at least one full annular corrugation. The corrugations on the locking band must match the corrugations on the pipe being joined.
The minimum width for locking bands is as follows:

for 2-2/3 x ½ inch corrugations	10-1/2 inches
3 x 1 inch corrugation	12 inches

For helical corrugations that have not been reformed the coupling bands must be at least 2 inches wider than the widths listed above.

Unless shown otherwise on the plans all bolts for coupling or locking bands shall be ½ inch in diameter. Bands 12 inches wide or less shall have a minimum of 2 bolts. Bands wider than 12 inches shall have a minimum of 3 bolts.

Bolts must be galvanized in accordance with AASHTO Designation M232 or ASTM A164 Type RS.

(3) Gaskets for corrugated steel pipe shall be closed cell expanded rubber and shall be formed into a continuous band. Gaskets may be either “O” ring or flat band as recommended by the pipe manufacturer. Flat band gaskets shall be a minimum of 7” wide and 3/8” thick. “O” ring gaskets shall be 13/16” diameter minimum for pipe 36” in diameter or less and 7/8” for pipe larger than 36” diameter and having ½” deep corrugations. “O” ring gaskets shall be a minimum of 1-3/8” diameter for pipe having 1” deep corrugations. When “O” ring gaskets are furnished, an additional flat gasket shall be furnished and placed between the overlapping ends of the coupling band. This flat gasket shall completely fill the gap between the “O” rings. All gasket materials shall be capable of producing a water tight joint that will meet the leakage requirements of these specifications.

2. CORRUGATED STEEL MANHOLE FITTINGS, AND CLEAN OUTS

A. FABRICATION

(1) Corrugated steel manholes and fittings shall be constructed of the same material and type of pipe furnished for the storm sewer line with the exception that manhole risers shall be helical corrugated single wall circular pipe when used with pipe arch sewers or smooth lined corrugated steel pipe. The thickness of the manhole riser shall be the same as would be required for the same type and diameter pipe if it were used for the storm sewer.

(2) Cleanouts for use on shallow storm sewer and inlet leads shall be manufactured from pipe meeting the requirements of these specifications. Cleanouts shall be constructed to the dimensions and in accord with the details shown on the plans.

B. CONNECTION TO MANHOLES AND CLEANOUTS

(1) Stub outs from manholes and cleanouts for connection to storm sewers and inlet leads shall have annular corrugations and shall be compatible with the type and size of pipe being connected. Stub outs provided for connection to PVC pipe storm sewers and inlet leads shall be sized so that the PVC pipe can be inserted into the stub leaving the least amount of annular space between the PVC pipe and the CSP practical. The PVC pipe shall be connected using an approved molded rubber or PVC sleeve connector clamped to both pipes with stainless steel straps.

The connector shall be a flexible coupling as manufactured by Fernco, 300 S. Dayton St., Davison, MI., or approved equal.

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C. LEAKAGE

Manholes, fittings and cleanouts shall meet the leakage requirements of these specifications.

D. SHOP DRAWINGS

The contractor shall submit shop drawings of all manholes, fittings and cleanouts for approval prior to their fabrication. A minimum of 5 sets of drawings for each manhole, each fitting and each cleanout shall be submitted.

E. CONCRETE SLAB TOPS

A reinforced concrete slab top shall be constructed for each manhole and cleanout. The slab shall extend to one foot (1') outside the riser section on all sides and shall have an eccentric 2' diameter opening for the manway located at the outside edge of the riser section. For manholes and cleanouts designated for standard manhole rings and covers the concrete top shall be 8 inches thick and shall be finished smooth to receive the manhole ring.

For manholes designated to receive pressure type manhole rings and covers the concrete slab top shall be a minimum of 12 inches thick and shall have L bolts imbedded in the concrete to fit the requirements of the manhole ring furnished. The slab shall be finished smooth to receive the manhole ring. The manhole ring shall be securely bolted to the slab and sealed using "Ram Nek" or an approved equal bitumastic sealer between the manhole ring and the concrete slab.

The concrete slab manhole tops shall be reinforced with number 4 steel reinforcing bars spaced at 12 inches on center each way. Additional diagonal bars shall be placed on 4 sides around the manway opening. The diagonal bars shall be number 4 rebar with a minimum length equal to the diameter of the manway opening plus 4 inches. The steel reinforcing mat shall be placed in the bottom of the slab with 1-1/2 inches protective covering.

F. PRESSURE MANHOLE RING AND COVER

(1) Pressure type manhole rings and covers shall be Western Iron Works No. 380-24P or approved equal. The manhole cover shall be sealed with an “O” ring gasket in a ring groove and shall be secured to the ring by six (6) 5/8-inch stainless steel bolts.

(2) The ring shall have six (6) 1-1/4 inch bolt holes in the flange for securing the ring to the concrete slab top on the manhole.

3. CORRUGATED STEEL PIPE SLOTTED DRAIN

(1) Corrugated steel pipe slotted drains shall be fabricated from full circle corrugated steel pipe conforming to these specifications.

(2) C.S.P. Slotted drains shall be of a type as manufactured by “Contech Construction Products, Inc.”, “Texas Corrugators”, “Caldwell Culvert Company” or approved equal.

(3) The upstream end of CSP slotted drains shall be equipped with a bend and a ring and cover of the some size as the pipe from which the slotted drain was fabricated to allow cleaning equipment to be inserted into the slotted drain. The ring and cover shall be Nenah Foundry Co. R-5901 open grate or R-5900 solid lid or approved equal. Unless shown otherwise on the plans the open grate shall be furnished.

(4) When slotted drain is to be connected to PVC leads, molded rubber or PVC flexible connector as specified for connections to manholes and cleanouts shall be furnished.

4. DAMAGED COATING

A. PROTECTION OF PIPE

(1) Pipe fittings and specials shall be handled and stored in a manner that will minimize damage to the coating.

(2) The fabrication process shall be designed to minimize the burning of coatings during welding.

(3) Pipe and/or fittings showing excessive abuse or damage will be rejected.

B. REPAIRING DAMAGE

(1) Pipe on which the metallic coating has been burned by welding or has been otherwise damaged in fabricating or handling, shall be repaired. The repair shall be done so that the completed pipe shall show careful finished workmanship in all particulars.

(2) The damaged area shall be cleaned to bright metal by blast cleaning, power disk sanding, or wire brushing. The cleaned area shall extend at least ½ inch into the undamaged section of the coating. The cleaned area shall be coated within 24 hours and before any rusting or soiling.

(3) Zinc-rich paint shall be applied to a dry film thickness of at least 0.005 inches over the damaged section and surrounding cleaned area. Zinc-rich paint shall be used for repair of damage to all types of metallic coating -zinc, aluminum, and aluminum-zinc alloy.

2.03 CAST-IN-PLACE CONCRETE SEWER PIPE (NON-REINFORCED) FOR STORM SEWERS ONLY

1. DESCRIPTION

This item shall cover machine cast-in-place monolithic non-reinforced concrete pipe, which shall consist of Portland cement concrete placed in a prepared trench at such locations and grades shown on the plans and intended to be used for the conveyance of storm water. Items and item numbers referred to in this specification are the items as given in the "Texas State Department of Highways and Public Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges."

2. MATERIALS

The cast-in-place pipe shall be constructed of Class "C" concrete. The concrete shall meet the requirements of Item 421, "Concrete for Structures," and Special Provision thereto, except as otherwise noted herein or on the plans. Type III Portland Cement shall be used.

The minimum compressive strength for concrete used in this item is 4000 psi. Backfilling operations may proceed when the concrete has reached 2000 psi compressive strength.

The coarse aggregate grading for pipe diameters 48 inches or less shall conform to that of Aggregate Grade No. 3, one inch (1") maximum size aggregate under Item 421. For pipe diameters over 48 inches, Coarse Aggregate No. 2, one and one third inch (1-1/3") maximum size aggregate shall be used.

No concrete having a slump in excess of 2" will be permitted for use in pipes with diameters of 48 inches and over. For pipes with diameters less than 48 inches, no concrete having a slump in excess of 3" will be permitted for use. At the option of the Contractor, sections of precast reinforced concrete pipe (D-load) may be substituted for cast-in-place concrete pipe. Pipe and installation shall conform to the requirements of Item 465, "Pipe Sewers." Backfill shall be in accordance with the requirements for other storm sewers in these specifications using crusher fines (chat).

3. PIPE MAKING EQUIPMENT

The pipe shall be constructed with equipment specially designed for constructing cast-in-place monolithic concrete pipe. The equipment shall be acceptable to the Engineer and the Contractor may be required to furnish evidence of successful operation in other work of the equipment he proposes to use. Equipment not suitable to produce the quality of work required for the pipeline will not be permitted to operate on the project.

4. DIMENSIONS AND TOLERANCES

The design shell thickness shall be as specified in Table 1.

TABLE I

Internal Diameter inches	Min. Shell Thickness inches
18	2
24	2-1/2
30	3
36	3-1/2
42	4
48	5
54	5-1/2
60	6
66	6-1/2
72	7
84	8
96	9
108	10
120	11

Variation in the internal diameter shall not exceed plus or minus 3 percent. The maximum allowable deviation form the true grade of the design invert of the pipe shall not exceed ½ inch either side of true grade. Where deviation from true grade occurs, true grade shall be re-established at a maximum departure of one-eighth inch per foot.

5. EXCAVATION AND BACKFILL

Excavation shall be in accordance with the requirement for other types of storm drains, except as modified herein. The trench shall be excavated in the lines and grades shown on the plans or as directed by the Engineer. The width of the trench shall be sufficient to accommodate travel of the pipe machine only. The bottom of the trench shall be shaped to the nominal outside circumference of the pipe. Excavation shall be performed from the outlet to the inlet. If the trench is over-excavated for the bottom 210 degrees of the pipe the excess area shall be filled with concrete. If rock is encountered, it will be removed at least 6 inches below the bottom of the pipe and the trench refilled with material sufficiently compacted to

allow operation of the machine and provide a smooth firm surface. The sidewall of the pipe shall be placed against undisturbed material.

Backfill material will be a crusher fine (chat) as described elsewhere in these Specifications. No backfill other than permitted for curing purposes shall be placed until the line has been inspected and approved by the Engineer. The trench may be completely backfilled after the pipe has been in place at least 24 hours and concrete strength requirements have been reached. Light traffic, axle load less than 6,000 pounds, may be routed over the pipe after backfill has been completed for twenty-four (24) hours. Unrestricted traffic may be permitted over the pipe after the backfill has been in place for forty-eight (48) hours.

All backfill material shall be mechanically compacted to 95% modified proctor or as directed by the Engineer.

6. CONSTRUCTION

All surfaces against which concrete are to be placed shall be free from standing water, mud, and debris. Absorptive surfaces against which concrete are to be placed shall be moistened thoroughly so that moisture will not be drawn from the freshly placed concrete.

The concrete shall be placed in one operation around the full circumference of the pipe by means of a traveling form. The forms shall be of sufficient strength to withstand vibrating or tamping the concrete and to permit workmen to walk on the forms without causing springing or bulging at any point.

As the traveling form moves forward, forms shall be placed inside the newly formed pipe to support a minimum of 230 degrees of the upper portion of the pipe.

The concrete shall be vibrated, rammed, tamped or worked with suitable appliances until the concrete has been consolidated to the maximum practicable density, free of rock pockets, and closes snugly against all surfaces or forms and provides a bond between the pipe shell and supporting earth.

When placing operations cease for any reason, the end of the pipe shall be left rough with a slope of approximately 45 degrees. The ends of the pipeline shall be covered with canvas or other suitable cover material to prevent excessive loss of moisture from the interior of the pipe already placed.

When starting pipe laying operation from a previously laid cast-in-place pipe or section of pre-cast pipe, a construction joint shall be made by excavating a “bell” completely around the end of the existing pipe and constructing a concrete collar to extend at least one foot either side of the joint with a minimum thickness equal to that of the wall of the pipe. The end of the existing pipe shall be clean and damp before continuing pipe making operations. Cleaning of the construction joint shall consist of removing all latency, loose or defective concrete, coatings, and any other deleterious materials.

All forms shall be clean and shall be placed at the trench side at the location of their proposed use for inspection by the Engineer. Forms, which are defective in any way, will not be used, and upon condemnation they shall be removed from the site of the work. The forms shall not vary more than ½ inch from the lower edge of a straightedge laid parallel to the centerline of the form, and shall be free of any holes larger than 5/8 inch in greatest dimension. The pipe machine shall be thoroughly clean and serviced prior to the placing of the concrete. Particular attention will be given to all parts of the machine with which concrete comes into contact.

Concrete chutes or trunks shall be provided to reach within 1 foot of the pipe machine hopper. The end of the chute or trunk shall discharge the concrete at the center of the hopper. Provisions shall be maintained to minimize segregation of the concrete mix in all phases of the operation.

Delays in placing shall be handled as follows or as otherwise directed. The concrete hopper on the pipe laying machine shall be kept ½ full at all times, provided, however, that when placing operations cease or are delayed for any reason for more than 20 minutes, the pipe machine shall be pulled forward until all the concrete is exhausted and until the top troweling skirt is clear of the concrete. If the pipe laying operation proceeds within one hour of the time of the last placement, no further steps need to be taken. However, if longer than one hour has elapsed, then a construction joint must be made as previously described. The end of the pipe shall be left rough and at the natural slope when the machine is moved forward.

All junctions of pipe shall be provided for at the time the cast-in-place pipe is placed.

Inside forms shall be removed from the pipe not sooner than 4 hours nor longer than 24 hours after placement of the concrete. Care shall be taken when removing forms to prevent damage to the pipe. The inside of the pipe shall be carefully inspected for imperfections in placement, and any required repairs or smoothing shall be made immediately to provide a uniform interior surface. No wash, mortar or concrete shall be applied to a surface not properly moistened or cleaned. Visible cracks shall be brushed with cement paste or chipped out and pointed up with cement mortar. Any cracks that appear to go through the shell shall be grooved and filled with mortar. All construction operations and methods for providing a watertight pipeline shall be the responsibility of the Contractor. Mortar shall consist of one part cement; two parts well graded sand passing 1/8-inch sieve. Wash shall consist of four parts cement, one part fire clay. The finished surface of the concrete pipe shall be substantially free of fractures, cracks and surface roughness.

7. CURING CONCRETE

Immediately after the concrete is placed the exposed surface of the concrete shall be cured by covering the top with a sheet of polyethylene film sealed with dirt along the edges. During the curing period following the placement of the concrete, the ends of the pipeline and all other openings into the pipeline shall be covered with canvas or other suitable material, except at locations where work is actually in progress. The inside surface of the pipeline shall not be cured.

8. MANHOLES AND BENDS

Manhole bases shall be hand formed on top of the pipe as soon as the pipe-placing machine has passed. Where required, the extra width for manholes shall be excavated ahead of the pipe placing operation. The base for the manhole shall be formed to receive a standard precast concrete barrel section and shall be shaped and smoothed so that the joint can be sealed water tight by use of “Ram Nek” or other approved joint sealing material.

Bends may be formed and cast in place or fabricated using precast reinforced concrete pipe (load D). Design and shop drawings shall be submitted to and approved by the Engineer before the bends are fabricated or cast.

9. MEASUREMENT

Measurement of manholes shall be as specified elsewhere in these specifications. Measurement of bends shall be as for other storm sewer pipe. The method of pipe measurement shall conform to that for other types of storm drainpipe in the section or storm drains in these specifications.

10. PAYMENT

Payment for cast-in-place non-reinforced pipe sewers, measured as prescribed above, will be made at the unit price bid per linear foot for the various sizes of “Pipe Sewers (Cast-in-Place)” complete in place. Payment for manholes shall be as specified elsewhere in these specifications.

Such payment shall be full compensation for furnishing all concrete materials, precast reinforced concrete pipe used in place of cast-in-place pipe, and for all other materials, tools, labor, equipment, and incidentals required to perform the applicable work prescribed herein.

When precast reinforced concrete pipe at the Contractor’s option is used in a line of cast-in-place pipe the additional excavation for the pipe will be subsidiary.

2.04 CENTRIFUGALLY CAST FIBERGLASS REINFORCED RESIN PIPE SEWERS

A. DIRECT BURY PIPES

1. GENERAL

All pipes, joints and fittings shall be manufactured in accordance with the requirements of the applicable standard given below except as noted herein:

Service	Standard
Non pressure Sanitary Sewer	ASTM D3262
Sewer Force Main and Effluent Lines	ASTM D3754

Pipes shall be centrifugally cast, fiberglass-reinforced polyester resin as manufactured by Hobas USA, Inc. or approved equal.

Minimum pipe stiffness when tested in accordance with ASTM D2412 shall be 46 psi.

2. MATERIALS

The manufacturer shall use only approved polyester resin systems for which he can provide a proven history of performance in these particular applications. The historical data shall have been acquired from a composite material of similar construction and composition as the proposed product.

The reinforcing glass fibers used to manufacture the components shall be of highest quality commercial grade of E-glass filaments with binder and sizing compatible with impregnating resins. Sand shall be minimum 98% silica with a maximum moisture content of 0.2%

3. DIMENSIONS

Pipe outside diameters shall be in accordance with AWWA Standard C151 and C950. For diameters larger than covered in those documents, OD's shall be as shown in Table 1.

TABLE I

*WP/s		0/46		50/46		100/46		150/46		200/46	
Nomin Pipe Sz. (in.)	Pipe OD (in.)	Min. wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt. (lb/ ft)	Min. Wall (in.)	Wgt (lb/ ft.)
18	19.50	.42	20	.41	20	.40	19	.38	18	.37	18
20	21.60	.46	25	.45	24	.43	23	.42	22	.40	21
24	25.80	.54	35	.53	34	.51	33	.49	31	.47	30
30	32.00	.66	54	.65	53	.62	51	.60	49	.57	47
36	38.30	.78	77	.77	76	.74	73	.71	70	.68	67
42	44.50	.90	104	.88	101	.85	98	.82	94	.78	89
48	50.80	1.02	134	1.00	131	.96	126	.93	122	.88	115
54	57.10	1.14	169	1.12	166	1.08	160	1.04	155	.99	147
60	62.90	1.26	209	1.23	204	1.19	197	1.14	188	1.09	180
66	69.20	1.38	249	1.35	243	1.30	234	1.25	228		
72	75.40	1.50	298	1.47	292	1.41	280	1.36	270		
78	81.60	1.62	352	1.58	343	1.52	331	1.47	320		
84	88.00	1.74	409	1.70	399	1.64	385				
90	94.30	1.86	468	1.82	458	1.75	440				
96	100.6	1.98	531	1.94	520	1.87	501				

- **Maximum nominal working pressure in psi/pipe stiffness in psi**

Pipe shall be supplied in nominal lengths of 20 feet. Actual laying length shall be the nominal plus or minus 2 inches. At least 90% of the total footage of each size and class of pipe, excluding special order lengths, shall be furnished in nominal length sections.

4. **PRESSURE CLASS & TESTING FOR SEWER FORCE MAINS AND EFFLUENT LINES**

The pipe nominal pressure class (PN) shall be equal to or greater than the maximum sustained operating pressure of the line. The minimum pressure rating for non-pressure pipe shall be 15 psi.

The maximum transient (operating plus surge) pressure of the line shall not exceed the pipe nominal pressure class by more than 40%.

Pipe hoop tensile strength for pressure pipe shall be verified as specified in the applicable standard (D3754 or C950) or by random burst testing at the same sampling frequency. All pipes shall be capable of withstanding a test pressure of 2 times the maximum sustained operating pressure of the line without leaking or cracking. This performance shall be periodically verified at the factory for pressure pipe at least once per lot as defined in D3754, section 7.1.

A. JOINTS

Unless otherwise specified, the pipe shall be field connected with fiberglass sleeve couplings that utilize elastomeric sealing gaskets made of EPDM rubber compound as the sole means to maintain joint water tightness. The joints must meet the performance requirements of ASTM D4161.

B. FITTINGS

Flanges, elbows, reducers, tees, wyes, laterals and other fittings shall, when installed, be capable of withstanding all operating conditions. Acceptable configurations include contact molded or metered fiberglass or properly protected standard ductile iron.

Unbalanced thrust forces shall be restrained with thrust blocks or other approved suitable methods. Fiberglass tees, wyes, laterals, or other similar fittings shall be fully encased in reinforced concrete designed to withstand the pressure forces.

2.05 POLYETHYLENE SEWER PIPE

A. SCOPE

(1) This specification covers Polyethylene (PE) pipe with a corrugated outer wall and a smooth interior wall, for use with non-pressure sanitary sewer systems. The PVC fittings and joints are included in the specification.

B. MATERIAL AND MANUFACTURING

1. PIPE MATERIALS

The pipe shall be made from clean virgin Polyethylene compounds having a cell classification of 324420C as defined by ASTM D-3350.

2. FITTING MATERIALS

The fittings shall be made from clean virgin polyvinyl chloride (PVC) compounds having a cell classification of 12454B, 1245C or 13343C as defined by ASTM D-1784.

Pipe shall be manufactured by simultaneous extrusion of the corrugated and smooth walls with the smooth inner wall fused to the outer corrugated wall.

Fittings shall be molded or fabricated.

3. JOINING MATERIALS

a. Gaskets
b. Elastomeric gaskets shall meet the requirements of ASTM F-477.
c. Lubricants

The lubricants used for assembly shall have no detrimental effect on the gasket or the pipe, and shall be per published recommendations of the pipe manufacture.

4. MATERIAL CERTIFICATION

A manufacture's or an independent laboratory certification shall be furnished to the purchaser/engineer that the products were manufactured, sampled, tested, and inspected at the time of manufacture in accordance with this specification.

C. PIPE DIMENSIONS

Pipe dimensions shall meet the following requirements when tested in accordance with ASTM D-2122.

Nominal Size	Avg. O.D.	Avg. I.D.
4	4.790 (121.7)	4.00 (101.6)
6	6.930 (176.0)	6.00 (152.4)
8	9.145 (232.2)	8.00 (203.2)
10	11.405 (289.7)	10.00 (254.0)
12	14.450 (367.0)	12.00 (304.8)
15	17.530 (445.3)	15.00 (381.0)
18	21/150 (537.2)	18.00 (457.2)

D. INSTALLATION

1. Joint Tightness

Minimum joint performance shall show no leakage when tested in accordance with ASTM D-3212.

2. Supplier Assistance

A manufacturers representative of the above referenced pipe material shall be present at the beginning of the installation as required by the Design Engineer or Contractor and shall remain on site until released by the Design Engineer or Field Inspector/Engineer.

2.06 INLETS FOR STORM SEWERS

A. CURB TYPE INLETS

(1) Curb inlets shall be constructed at the locations and to the lines and grades or shown on the plans or as directed by the Engineer.

(2) Curb inlets shall be constructed of reinforced class “C” concrete in accordance with Section 1-B “Concrete Structures” and the plans and detail drawings.

(3) The curb section and the curb inlet shall conform to the curb and gutter section in which it is placed in so far as it is possible.

B. GRATE TYPE INLETS

(1) Grate inlets shall be constructed at the locations and the lines and grades as shown on the plans or as directed by the Engineer.

(2) Concrete boxes for grate inlets shall be constructed of reinforced Class “C” concrete in accordance with Section 1-B “concrete Structures” and the plans and detail drawings.

(3) Grates shall be constructed of ASTM A-48 gray iron having minimum tensile strength of 35,000 psi or ductile iron having a minimum tensile strength of 60,000 psi and a yield strength of 40,000 psi.

The size, style, shape, type, weight and class shall be as shown on the plans.

Grate frames shall be as manufactured for the grate by the grate fabricator. If more than one type or style or frame is available, the type and/or style shall be as indicated on the plans.

C. COMBINATION INLETS

(1) Combination curb and grate inlets shall be constructed at the locations and to the lines and grades as shown on the plans or as directed by the Engineer.

(2) Combination inlets shall be constructed in accordance with the applicable requirements for “Curb type inlets” and “Grate type inlets” above.

D. INLET LEADS

(1) Inlet leads may be PVC pipe or CSP as shown on the plans and called for in the bid proposal.

(2) Inlet leads shall be constructed in accordance with the specifications for type of material used and the plans and detail drawings.

(3) Where two or more leads are joined together to form a single lead to the storm sewer they shall be joined at a cleanout unless shown otherwise on the plans.

(4) Inlet leads shall be connected to the storm sewer at a manhole. The leads shall enter the manhole at a point that will match the .8 points of the two pipes as near as practical.

E. CLEANOUT FOR STORM SEWER INLET LEADS

Cleanouts at the juncture of inlet leads shall be constructed in accordance with the dimensions and requirements shown on the plans and detail drawings.

F. CORRUGATED STEEL SLOTTED DRAINS

(1) Corrugated steel slotted drains shall be as specified in section 2.02-3 of these specifications and shall be furnished in the lengths and diameters as shown on the drawings and in the bid proposal.

(2) Corrugated steel slotted drains are approved for nuisance water inlets only and are sized to allow for considerable clogging before they will cease to function in this capacity.

2.07 MANHOLES

1. GENERAL

A. **CONCRETE MANHOLES ARE NOT TO BE USED FOR SANITARY SEWERS AFTER DECEMBER 31, 2002. FIBERGLASS MANHOLES ARE TO BE USED FOR ALL SANITARY SEWERS**. Concrete manholes can be used for storm water sewers.

All manholes furnished for this project shall be precast unless noted otherwise on the plans and or bid proposal.

Precast manholes shall conform to the requirements of ASTM Specification C-478 with the modifications given in this article.

Concrete used for precast manholes shall have a minimum 28-day compressive strength of 4,000 psi and shall have a minimum cement content of 7 sacks per cubic yards.

All manhole sections shall be furnished with tongue and groove type joints suitable for sealing water tight with rubber or bituminous joint sealer or gaskets.

B. When cast in place components for manholes are called for on the plans the concrete used shall have a minimum 28 day compressive strength of 4,000 psi and a minimum cement content of 7 sacks per cubic yard and shall conform to the requirements of ASTM Specification C-478 with wall thickness as shown on the plans and detail drawings.

Aggregate for the concrete shall meet the sodium sulfate and magnesium sulfate test as required in ASTM Specification C-33.

C. Mortar for filling and shaping the inverts in precast manhole bases and for mortaring precast grade rings and cast iron rings and covers shall consist of one part Portland cement ASTM C150 Type 1 to 3 parts washed sand mixed with just enough water to make a workable mix.

D. Manholes for corrugated steel pipe may be precast concrete or corrugated steel as described in Article 2.02. The type and material shall be as shown on the plans and called for on the bid proposal.

2. PRECAST MANHOLES

A. Manhole base sections shall be cast with an integral floor and shall be constructed in accordance with the details shown on the plans.

B. Manhole riser sections shall be constructed in accordance with the plans and details and these specifications. When pipe openings are required in manhole riser sections they shall be of the same type and meet the same requirements as the pipe openings in the precast bases.

Manhole riser sections for each manhole shall be furnished in the proper combination of lengths to construct the manhole in conjunction with the other components to the finished grade shown on the plans.

C Eccentric cone sections shall be constructed in the same manner as other components except the top of the cone will have a flat surface to accommodate the manhole ring and cover or grade adjusting rings instead of a tongue or groove.

Generally openings will not be required in the wall of the cone section of the manhole.

D. Manhole grade rings shall comply with all the requirements for manhole riser sections except they shall be cast smooth both sides without tongues and/or grooves.

Manhole grade rings shall be sized to fit the smooth small end of the cone section and shall be cast in heights of 2", 4" or 6".

E. Joint seals for precast concrete manholes shall be a bitumastic sealer such as Ram-Nek or approved equal, a soft rubber sealer such as Butyl-Lok or approved equal or an approved "O" ring gasket or a combination of the above if required to achieve a water tight joint.

F. All water tight Storm Sewer Manholes constructed on this project shall have Neenah R-1755-C watertight manhole rings and covers or approved equal.

No separate payment will be made for the protective plastic manhole linings or for the water tight manhole rings and covers but the cost of these items shall be included in the price bid for water tight Storm Sewer Manholes.

In addition to the markings required by ASTM Specification C-478, all components of each manhole shall be, marked with location identifying information such as manhole number or line number and station value where manhole is to be installed. If the manhole has openings for installation of branch lines above the base section, each manhole section shall be clearly marked with the sequence of installation to assure the branch opening will be at the correct elevation.

3. FIBERGLASS MANHOLES

A. SCOPE

Fiberglass reinforced polyester manholes shall be manufactured from commercial grade polyester resin or other suitable polyester or vinyl resins, with fiberglass reinforcements and in accordance with the latest edition of ASTM D 3 753 (Standard Specification for Glass-Fiber Reinforced Polyester Manholes). Fiberglass manholes shall be used with fiberglass or plastic sewer pipe.

B. MATERIALS

1. **Resin:** The resins used shall be a commercial grade unsaturated polyester resin.

2. **Reinforcing Materials**: The reinforcing materials shall be commercial Grade "E" type glass in the form of mat, continuous roving, chopped roving, roving fabric, or a combination of the above, having a coupling agent that will provide a suitable bond with the resin and leave a resin rich surface.

3. **Surfacing Materials**: If reinforcing materials are used on the surface exposed to the contained substance, they shall be a commercial grade chemical-resistant glass organic surfacing mat having a coupling agent that will provide a suitable bond with the resin and leave a resin rich surface.

4. **Fillers and Additives**: Fillers, when used, shall be inert to the environment and wet well construction. Additives, such as thixotropic agents, catalysts, promoters, etc., may be added as required by the specific manufacturing process to be used. The resulting reinforced plastic material must meet the requirement of this specification.

C. FABRICATION

1. **Exterior Surface**: The exterior surface shall be relatively smooth with no sharp projections. Handwork finish is acceptable if enough resin is present to eliminate fiber show. The exterior surface shall be free of blisters larger than ½ inch in diameter, de-lamination and fiber show.

2. **Interior Surface**: The interior surface shall be resin rich with no exposed fibers. The surface shall be free of crazing, de-lamination, blisters larger than ½ inch in diameter, and wrinkles of 1/8 inch or greater in depth. Surface pits shall be permitted up to 6 per square foot if they are less than ¾ inch in diameter and less than 1/16 inch deep.

3. **Defects not permitted**:

Exposed fibers: glass fibers not wet out with resin.
Resin runs: runs of resin and sand on the surface
Dry areas: areas with glass not wet out with resin.
De-lamination: separation in the laminate.
Blisters: light colored areas larger than ½ inch in diameter.
Crazing: cracks caused by sharp objects
Pits or Voids: air pockets.
Wrinkles: smooth irregularities in the surface.
Sharp projection: fiber or resin projection necessitation gloves for handling.

D. PHYSICAL REQUIREMENTS

1. **Load Rating**: The complete manholes shall have a minimum dynamic-load rating of 16,000 ft-lbs. when tested in accordance with this standard. In order to establish this rating, the complete manhole shall not leak, crack, or suffer other damage when load

tested to 40,000 ft-lbs. and shall not deflect vertically downward more than ¼ inch at the point of load application when loaded to 24,000 lbs.

2. **Stiffness**: The manhole cylinder shall have a minimum pipe stiffness value as shown below when tested in accordance with A.S.T.M. 3753 8.5 (note 1)

Depth Ft.	F/dy.psi
3 – 6.5	0.75
7 – 12.5	1.26
13 – 20.5	2.01
21 – 25.5	3.02
26 – 35	5.24

3. **Soundness:** In order to determine soundness, apply an air or water pressure test to the manhole test sample. Test pressure shall not be less than 3 psig or greater than 5 psig. While holding at the established pressure, inspect the entire manhole for leaks. Any leakage through the laminate is cause for failure of the test. Refer to A.S.T.M. 3753 8.6.

4. **Chemical Resistance**: The fiberglass manhole and all related components shall be fabricated from corrosion proof material suitable for atmospheres containing hydrogen sulfide and dilute sulfuric acid as well as other gases associated with the wastewater collection.

5. **Physical Properties**:

	Hoop Direction	Axial Direction
a. Tensile Strength (pi)	18,000	5,000
b. Tensile Modulus (pi)	0.6×10^6	0.7×10^6
c. Flexural Strength (psi)	26,000	4,500
d. Flexural Modulus (psi)	1.4×10^6	0.7×10^6
e. Compressive (psi)	18,000	10,000

6. **Minimum Wall Thickness**: Shall be 0.48” nominal at all depths of the manholes.

E. TEST METHODS: All tests shall be performed as specified in A.S.T.M 3753 latest edition, section 8. Test method D-790 (see note 5) and test method D-695.

F. QUALITY CONTROL: Each completed manhole shall be examined for dimensional requirements, hardness, and workmanship. All required A.S.T.M 3753 testing shall be completed and records of all testing shall be kept and copies of test records shall be presented to customer upon formal written request within a reasonable time period.

G. CERTIFICATIONS: As a basis of acceptance the manufacturer shall provide a independent certification which consist of a copy of the manufacturer’s test report and accompanied by a copy of the test results that the manhole has been sampled, tested,

and inspected in accordance with the provisions of this specification and meets all requirements.

H. SHIPPING AND HANDLING: Do not drop or impact the fiberglass manhole. Fiberglass manhole may be lifted by inserting a 4" x 4" x 30" timber into the top of manhole with cable attached or by a sling or "choker" connection around center of manhole, lift as required. Use of chains or cables in contact with the manhole surface is prohibited.

I. CONCRETE:

1. **Fiberglass Bottom**: Manholes may have fiberglass bottoms that are a minimum of 6" below the OD of the pipe invert when concrete is used to form the invert. Manufactured fiberglass inverts and bench areas are allowed, or concrete may be used to form bench area and invert. Concrete is to be used on top of anti-flotation ring and around the reducer section as required for buoyancy.

2. **Concrete Bottom**: Lower manhole into wet concrete until it rests at the proper elevation, with a minimum of 4 inches of fiberglass manhole inserted into the wet concrete below flow line, then move manhole to plumb. The concrete shall extend a minimum of one foot from the outside wall of the manhole and a minimum of 6 inches above incoming lines. On the inside concrete shall form the bench and invert area and rise a minimum of 4 inches above incoming lines. If required by Engineer concrete may be used around reducer section for buoyancy control.

BACKFILL:

1. **Backfill Material**: Unless shown otherwise on drawings and approved by the Engineer, sand, crushed stone, or crushed gravel shall be used for backfill around the manhole for a minimum distance of one foot from the outside surface and extending from the bottom of the excavation to the top of the reducer section. Suitable material chosen from the excavation may be used for the remainder of the backfill. The material chosen shall be free of large lumps or clods, which will not readily break down under compaction. This material will be subject to approval by Engineer.

2. **Backfill Procedure**: Backfill shall be placed in layers of not more than 12 loose measure inches and mechanically tamped to 95% Modified Proctor Density, unless otherwise approved by Engineer. Backfill shall be placed in such a manner as to prevent any wedging action against the fiberglass manhole structure.

K. MARKING and IDENTIFICATION: Each manhole shall be marked on the inside and outside with the following information:

Manufacturer's name or trademark
Manufacturer's factory location
Manufacturer's serial number
Total length

4. MANHOLE RINGS AND COVERS

A. Manhole rings and covers furnished for this project shall be pattern No. 300-24 as produced by Western Iron Works, Inc., 21 E. 6th St., San Angelo, Texas 76903-5493 or Bass and Hays Foundry, Inc., 238 South Bagdad Rd., Grand Prairie, Texas 75050, or approved equal.

B. WATER TIGHT MANHOLE COVERS

(1) Water tight manhole rings and covers furnished for this project shall be number R-1755-C as manufactured by Neenah Foundry Company, P.O. Box 729, Neenah, Wisconsin 54957, or approved equal.

(2) When watertight replacement sanitary sewer manhole rings and covers are called for on the plans and in the bid proposal they shall be Neenah Foundry Co. No. R-1755-C or approved equal.

No separate payment will be made for adjusting to grade of the replacement watertight manhole rings and covers. The contractor shall schedule this work to coincide with other manhole and water valve adjustments and any costs that might be involved shall be included in the price bid for replacement water tight manhole rings and covers.

(3) Manhole vents shall be used in conjunction with watertight rings and covers spaced every third manhole or as indicated on the plans. Vents shall be constructed as indicated on City design and construction standards.

C. Pressure type manhole rings and covers may be required for certain storm sewer applications. When pressure type manhole rings and covers are called for on the plans and/or bid schedule they shall be Western Iron Works Pattern #380-24P or approved equal. The manhole cover shall be sealed with an “O” ring gasket in a ring groove and shall be secured to the ring by six (6) five-eighths inch (5/8”) stainless steel bolts. The ring shall have six (6) one and one quarter inch (1-1/4”) bolt holes in the flanges for securing the ring to the concrete slab top on the manhole.

D. All manhole covers except grate type shall have two blind pick holes or pick bar cast into them. The blind pick holes or pick bars shall be placed on opposite sides of the cover.

E. All manhole covers except grate type shall have cast into their tops in letters 2 inches high minimum one of the following:

CITY OF MIDLAND
SANITARY SEWER
OR
CITY OF MIDLAND
STORM DRAIN

which ever is applicable.

2.08 GRANULAR MATERIALS

A. GRANULAR MATERIAL GRADATION CLASSIFICATIONS:

Granular materials furnished for foundation, bedding, encasement, backfill, or other purposes as may be specified, shall consist of any natural or synthetic mineral aggregate such as sharp grained sand, crushed gravel, crushed rock, crushed stone, or slag, and shall conform to the following specifications and/or gradation.

Note all materials used for these purposes shall be crushed and shall have at least two broken faces. Pea gravel will NOT be allowed.

	Foundation	Bedding	Encasement	Backfill
ASTM C33 Grade #57	x			
ASTM C33 Grade #67	x			
ASTM C33 Grade #8		x	x	
THD 1982 Item 302 Type D Grade 4		x	x	
THD 1982 Item 302 Type D Grade 5			x	
Crusher fines**			*x	x

*100 percent of crusher fines that are to be used within 12 inches of the top of pipe must pass the ¾" sieve.

** Approximate Gradation for Crusher Fines.

Sieve Size	% Passing
2 inch	100
# 4	35 - 100
# 10	20 - 100
# 40	5 - 35
#200	4 - 10

Crushed stone material proposed as an alternate for use on this project and not meeting the above specifications must be approved in writing at least 48 hours prior to the time scheduled for opening bids.

B. GRANULAR MATERIAL USE DESIGNATIONS:

Granular materials provided for Foundation, Bedding, Encasement, or Backfill use as required by the contract, either as part of the pipe item work unit or as a separate contract item, shall be classified as to use in accordance with the following:

MATERIAL USE DESIGNATION	ZONE DESIGNATION
Granular Foundation	Placed below the bottom of pipe grade as replacement for unsuitable or unstable soils, to achieve better foundation support.
Granular Bedding	Placed below the midpoint of the pipe prior to pipe installation, to facilitate proper shaping and achieve uniform pipe support. Also for Class B bedding where specified.
Granular Encasement	Placed below an elevation one half foot (6") above the top of pipe, after pipe installation, for protection of the pipe and to assure proper filling of voids and thorough consolidation of backfill.

In each case above, unless otherwise indicated, the lower limits of any particular zone shall be the top surface of the next lower course as constructed. The upper limits of each zone are established to define variable needs for material gradation and compaction or void content, taking into consideration the sequence of construction and other conditions. The material use and zone designations described above shall only serve to fulfill the objectives and shall not be construed to restrict the use of any particular material in other zones where the gradation requirements are met.

PART 3 – EXECUTION

3.01 LOCATION OF WORK

A. The work will be located as shown on the plans.

B. It may be necessary for the Engineer to shift lines as reasonable amount to avoid an obstruction to the construction or to reduce right of way difficulties. The Contractor will not be allowed any additional compensation due to shift of lines. Additional compensation will be allowed only for lengthening of lines.

3.02 PROTECTION OF SURFACE STRUCTURES

A. All surface structures and features located outside the permissible excavation limits for underground installations, together with those within the construction areas which are indicated in the Plans as being saved, shall be properly protected against damage and shall not be disturbed or removed without approval by the Engineer.

B. Obstructions such as street signs, guard posts, mail boxes and other items of prefabricated construction may be temporarily removed during construction provided that essential service is maintained in a relocated setting as

approved by the Engineer and that non-essential items are properly stored for the duration of construction. Upon completion of the underground work, all such items shall be replaced in their proper setting. This removal, relocation and replacement shall be at the sole expense of the Contractor.

In the event of damage to any surface structures or improvements, either privately or publicly owned, in the absence of construction necessity, the Contractor will be required to replace or repair the damaged property to the satisfaction of the Engineer and without cost to the Owner.

3.03 INTERFERENCE OF UNDERGROUND STRUCTURES

A. When any underground structure interferes with the planned placement of the pipeline or appurtenances to such an extent that alterations in the work are necessary to eliminate the conflict or avoid endangering effects on either the existing or proposed facilities, the Contractor shall immediately notify the Engineer and the Owner of the affected structure. When any existing facilities are endangered by the Contractor's operations, he shall cease his operations at the site and take such precautions as may be necessary to protect the in place structures until a decision is made as to how the conflict will be resolved.

B. Without specific authorization from the Engineer, no essential utility service shall be disrupted, nor shall any change be made in either the existing structures or the planned installations to overcome the interference. Alterations in existing facilities will be allowed only to the extent that service will not be curtailed unavoidably and then only when the encroachment or relocation will satisfy all applicable regulations and conditions.

C. Wherever alterations are required as a result of unforeseen underground interference not due to any fault or negligence of the Contractor, the Engineer will issue a written order covering any additional or extra work involved and specifying the revised basis of payment, if any. Any alterations made strictly for the convenience of the Contractor shall be subject to prior approval and shall be at the Contractor's expense.

D. No extra compensation will be allowed for delays caused by the interference of underground structures.

3.04 SEPARATION BETWEEN SANITARY SEWERS AND WATER MAINS

A. Sanitary sewers and service lines shall be installed so that the separation between the sewer and water mains is not less than 9 feet in all directions. The 9 feet shall be measured between the nearest outside edges of the pipe.

B. When the required 9 foot minimum separation cannot be maintained and a sanitary sewer must be constructed parallel to a water main, the sanitary sewer shall be constructed of ductile iron or PVC pipe meeting AWWA specification or having NSF approval for potable water pipe, with a pressure rating of 100 psi for both the pipe and the joint. The sanitary sewer line shall

be installed in a separate trench and may be placed no closer than 2 feet vertically and 4 feet horizontally from the water main, with the separation being measured from the nearest outside walls of the pipes. The sanitary sewer shall be constructed lower than the water main.

C. When a sanitary sewer must cross a water main and the 9 feet required separation cannot be maintained, the sanitary sewer may be constructed with a minimum clear separation between the outside diameters of the two pipes of 6 inches if that part of the sanitary sewer within 9 feet of the water main is constructed of ductile iron pipe or PVC pipe meeting AWWA specifications, having a 150 psi pressure rating and equipped with pressure type joints. One length of the sewer pipe must be centered on the water main and where possible, the sanitary sewer should pass under the water line.

D. When the 9 foot required separation cannot be maintained and a sanitary sewer force main must be constructed parallel to a water main, the sanitary sewer force main shall be constructed of ductile iron or PVC pipe meeting AWWA specifications and having a pressure rating of 150 psi and equipped with pressure type joints. The force main must be constructed with a minimum vertical separation of 2 feet and a minimum horizontal separation of 4 feet measured between the outside diameters of the pipes. The force main must be constructed lower than water main.

Table I showing separation of water and sewer lines and construction materials allowed:

TABLE 1
SEPARATION OF WATER AND SEWER LINES

Condition	Location	Material		Separation (Min.)		Comments
		Water	Sewer	Vert.	Horiz.	
NEW WATER AND NEW SEWER SYSTEM						
New Water & New Sewer Gravity Sanitary Sewer Parallel to Water Main	Water above Sewer	Std.	CI DI PVC 150 PSI	2’	4’	Separate Trenches
Gravity Sanitary Sewer Crossing Water Main	Water above Sewer or Sewer above Water	Std	CI DI PVC. 150 PSI	6”	NA	Center one joint of sewer pipe on water main
Gravity Sewer Crossing Water Main	Water above Sewer	Std	ABS, Clay Conc. composite	2’	NA	Cement stabilize sand initial backfill zone each side of crossing. Center of sewer for 9 ft one joint of sewer pipe on water Main
NEW WATER AND EXISTING SANITARY SEWER						
New Water Parallel Existing Sewer	Water above Sewer	Std.	Clay, Conc. ABS CI DI PVC	2’	4’	If sewer shows no sign of leakage, then leave sewer alone. If Sewer shows signs of leakage, then repair or replace.
New Water Crossing Existing Sewer	Water above Sewer	Std	Clay, ABS Conc. composite	2”	NA	If sewer shows no sign of leakage, then leave sewer alone if sewer shows signs of leakage then repair or replace.
New Water Crossing Existing Sewer	Sewer above Water	Std	Clay, ABS Conc. composite	2’	NA	Replace existing sewer with one joint CI,DI,PVC-150 Centering over waterline
New Water Parallel to Existing Sewer	Sewer above Water	Std	Clay, ABS Conc. composite	2’	4’	Replace existing sewer with CI, DI, PVC – 150 PSI or Cement Stabilized sand back- fill initial Backfill none of sewer where parallel closer than 9 ft., or Encase the water in 150 PSI Pipe two nominal sizes larger.

EXISTING WATER AND NEW SANITARY SEWER						
New Sewer parallel Existing Water	Water above Sewer Or Sewer above Water	Std	CI DI PVC 150 PSI	2'	4'	Separate trenches
New Sewer crossing Existing Water	Water above Sewer or Sewer above water	Std	CI DI PVC 150 PSI	6"	NA	Center one joint of sewer pipe on water main.
New Sewer crossing Existing Water	Water Above Sewer	Std	Clay, ABS Conc. composite	2'	NA	Cement Stabilize sand initial backfill zone of sewer for 9 ft each side of crossing. Center one joint of sewer pipe on water main.

3.05 EXCAVATION

A. Excavation of every description and of whatever materials encountered shall be made to the alignment and depth shown on the plans or as directed by the Engineer. Excavation shall be made by open cut. Sides of trenches shall be kept as nearly vertical as possible and the trench shall be so braced, sheeted and drained that workmen may work safely and efficiently therein. The trenches shall be sufficiently straight between designated angle points to permit the pipe to be laid true to line in the approximate center of the trench.

B. The trench width may vary with and depend upon the depth of trench, the diameter of pipe to be laid and the nature of the material to be excavated; but in any case shall be of ample width to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted properly. The minimum width of unsheeted trench shall be 18 inches. The maximum clear width of trench at the top of the pipe shall be not more than two (2) feet greater than the outside diameter of the pipe for pipes up to 33" diameter except by consent of the Engineer. Whenever, for any reason, the maximum trench width is exceeded, the Contractor shall provide, at his own expense, pipe of higher class and/or bedding adequate to sustain the increased soil load as calculated by the Engineer.

C. Trenches shall be undercut to provide for the class bedding specified and/or shown on the plans. Bell holes shall be excavated to insure the pipe resting for its entire length upon the bedding material. Where trenches are under-cut beyond the depth required for bedding the trench shall be brought to grade by using crushed aggregate as specified for foundation herein. The use of loose native soil will NOT be permitted for this purpose.

D. No pipe shall be laid in water. Where the ground water table is at or above trench bottom, the Contractor shall de-water the trench to permit the pipe to be laid on a solid foundation.

   Costs for de-watering by whatever method selected shall be considered incidental to the price bid per foot of pipe.

   The Contractor shall discharge pumps to the natural drainage channels, or if permitted, to other sewer or drains.

Where sewer pipelines are located in or across streambeds or drainage ditches, the Contractor shall divert the stream flow and de-water each section as the work progresses.

E. Temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers, and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his own expense under the direction of the Engineer.

F. Whenever wet, soft or unstable soil, incapable of properly supporting the pipe, manholes or other structure is encountered in the trench, a further depth and/or width shall be excavated and refilled to trench bottom grade with gravel or other approved suitable material thoroughly compacted to assure a firm foundation for the pipe.

G. Rock, boulders and large stones shall be removed to provide a clearance of at least six (6) inches below the outside barrel of the pipes, valves, or fittings and to a clear width of six (6) inches on each side of all pipe and appurtenances for pipe 15 inches in diameter or less, and a clear width of nine (9) inches on each side of all pipe and appurtenances for pipe larger than 15 inches in diameter. Adequate clearance for properly joining pipe laid in rock trenches shall be provided at bell holes. The space between the rock at the bottom of the trench and the bottom of the pipe barrel shall be filled with compacted bedding material.

H. The Engineer shall be notified of any need for blasting to remove materials which cannot be broken up mechanically, and there shall be no blasting operations conducted until the Engineer's approval has been secured. Blasting operations will be allowed only when proper precautions are taken to protect life and property, and then shall be restricted as the Engineer directs. The Contractor shall assume full responsibility for any damage caused by blasting, regardless of the requirements for notification and approval. The Contractor shall secure any required permits for blasting and shall conduct blasting operations in conformance with all applicable State and local laws, regulations and ordinances.

I. In the event the Contractor desires to employ tunneling in locations other than as shown on the Plans in order to avoid replacement of sidewalks, etc., he shall do so only upon receipt of specific permission from the Engineer. Tunneling of this nature shall be considered incidental.

J. Excavated materials will be classified for reuse as being either suitable or unsuitable for backfill or other specified use.

3.06 SPECIAL SAFETY PROVISIONS

1. TRENCH SAFETY SYSTEMS

A. DESCRIPTION

This item shall govern for the Trench Safety Systems required for the construction of all trench excavation to be utilized in the project and including all additional excavation and backfill necessitated by the safety system. A trench shall be defined as a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. The depth is five feet or more. Trench Safety Systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, de-watering or diversion of water to provide adequate drainage.

B. CONSTRUCTION METHODS

Trench safety systems shall be accomplished in accordance with the detailed specifications set out in the provisions of Excavation, Trench, and Shoring, Federal Occupational Safety and Health Administration (OSHA) Standards, 29CFR, Part 1926, Subpart P, as amended, including Proposed Rules published in the Federal Register (Vol. 52, No. 72) on Tuesday, October 31, 1989. The sections that are incorporated into these specifications by reference include Sections 1926-650 through 1926-652. Legislation that has been enacted by the Texas Legislature, being Tex. Rev. Civ. Stat. Ann. Arts. 1015q, 2368a.6 (Vernon Supp. 1988) with regard to Trench Safety Systems, is hereby incorporated, by reference into these specifications.

A reproduction of the OSHA Publication 2226 is attached for the convenience of the Contractor. The City assumes no responsibility for the accuracy of the reproduction or that it reflects current law. The Contractor is responsible for obtaining a copy of this section of the Federal Register for his use.

If the contractor elects to use a trench protective system that, in the Proposed Rules, requires “Design by a qualified person or a qualified engineer,” [For example see 1926.652 (b) (3) and 1926.652 (c) (4)], a “qualified person or qualified engineer” shall be a Professional Engineer registered in the State of Texas. The Contractor is responsible for obtaining boring and soil analysis as required for the planned design. The trench excavation is to be designed in conformance with OSHA standards and regulations.

C. TRENCH SAFETY PROGRAM

The Contractor shall submit a safety program specifically for the construction of trench excavation. The trench safety program shall be in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

D. INSPECTION

The Contractor shall make daily inspections of the Trench Safety Systems to ensure that the systems meet OSHA requirements. Daily inspection is to be made by a "competent person" provided by the Contractor. If evidence of possible cave-ins, or slides, is apparent, all work in the trench shall cease until the necessary precautions have been taken by the Contractor to safeguard personnel entering the trench. It is the sole duty, responsibility and prerogative of the Contractor, not the owner or the Engineer, to determine the specific applicability of the designed trench safety systems to each field condition encountered on the project. The Contractor shall maintain a permanent record of daily inspections.

2. SAFETY RESTRICTIONS - work near high voltage lines

The following procedures will be followed regarding the subject item on this contract:

A. Warning signs painted yellow with black letters that are legible at twelve feet shall be placed inside and outside vehicles such as cranes, derricks, power shovels, drilling rigs, pile drivers, hoisting equipment or similar apparatus. The warning sign shall read as follows:

"WARNING - UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN SIX FEET OF HIGH VOLTAGE LINES."

B. All equipment except back hoes or dippers that may be operated within ten feet of high voltage lines shall have an insulating cage-type of guard about the boom or arm and insulator links on the lift hook connections.

C. When necessary to work within six feet of high voltage electric lines, notification shall be given the power company who will erect temporary mechanical barriers, de-energize the line, or raise or lower the line. The notifying department shall maintain an accurate log of all such calls to the Power Company, and shall record action taken in each case.

D. The Contractor is required to make arrangements with the Power Company for the temporary relocation or raising of high voltage lines at the Contractor's sole cost and expense.

3.07 PIPE LAYING

A. All gravity pipe shall be laid using approved grade boards, furnished and set by the Contractor at no additional cost to the Owner, according to the grade stakes established by the Engineer. The maximum spacing of grade boards shall be fifty (50) feet. No sewer shall be laid unless there is a minimum of three grade boards set to check the proper grade and alignment ahead. The Contractor shall provide and use a suitable grade rod to insure the proper grade of the pipe.

B. The Contractor may use the laser beam method of setting a line and grade for the sewer by using the laser beam coaxially through the center of the sewer being laid. The laser beam projector is to be rigidly mounted to its support platforms, with a two-point suspension, or equivalent, assuring that all ground and equipment vibrations are kept to an absolute minimum. The Contractor shall furnish all equipment including equipment necessary to control atmospheric conditions in the pipe to keep line and grade to acceptable standards of accuracy. Competent experienced people who have been properly trained to operate the equipment used must operate the laser beam system.

C. The Contractor shall stake check pegs at all manholes throughout the job. Check pegs midway between manholes and any other checkpoints deemed necessary to assure accuracy of the equipment shall be provided by the contractor.

D. Each piece of pipe and special fitting shall be carefully inspected before it is placed and no defective pipe shall be laid in the trench. Pipe laying shall proceed upgrade, starting at the lower end of the grade and with the bells uphill. No pipe shall be laid except in the presence of an inspector representing the Engineer. Any pipe laid except in the presence of an inspector representing the Engineer shall be subject, at the contractor's expense, to a television camera inspection and survey by the city. Trench bottoms found to be unsuitable for foundations after pipe laying operations have started shall be corrected and brought to exact line and grade with approved compacted granular material as specified for foundation in Item 2.07 A. of these specifications.

E. Pipe laying shall proceed up-grade with spigot or tongue ends pointing in the direction of flow. The spigot shall be centered in the bell, and pipe shoved into position, and brought into true alignment. It shall be secured there with bedding material carefully tamped under and on each side of it, excepting at bell holes. Care shall be taken to prevent dirt from entering the joint space.

F. Any defective or damaged pipe discovered after the line is laid or any gravity pipe, which has had its grade or joint, disturbed after laying shall be removed and replaced or relayed. The section of line in which such damaged or displaced section is discovered shall be retested after corrections are made.

G. Where excavation for buildings or other portions of the work have been carried below the line and grades of the pipe, thorough tamping of approved crushed stone backfill and the use of adequate bracing and blocking under the pipe will be required to insure against settling and shearing of the pipe. In areas where noted on plans, Portland cement stabilized material or concrete shall be used for backfill to provide adequate bracing for pipe and protection of structures.

H. All manhole connections for PVC or other Polymer based pipe shall be made using "A Lok Gaskets" or "Kor-N-Seal" boots or other approved water stop devices. Only Portland cement grout that expands upon curing or approved non-shrink grout will be incorporated into any manhole connection.

I. Connections to manholes for other types of pipe shall be in accord with the pipe manufacturers specifications and other applicable requirements of these specifications. The resulting joint shall meet the leakage test requirements of these specifications.

J. The exposed end of all pipes shall be fully protected with a stopper or bulkhead at the end of each day's work to prevent earth, debris, small animals, or other substances from entering the pipe. The interior of the sewer shall be carefully freed from all dirt, jointing compound, or superfluous material of every description as the work progresses.

3.08 CONNECTION AND ASSEMBLY OF JOINTS

1. JOINING PVC OR OTHER POLYMER BASED PIPE

A. The type of joint and the material to be used shall be as shown on the plans or specified herein. Factory cast compression joints shall be free of dirt and lubricated before inserting the barrel into the bell. After the spigot is centered in the bell, the pipe shall be shoved home solidly by using a wood block and bar. The Contractor shall keep the ends of the pipe closed to prevent dirt and other material from entering the pipe during placement. All joints must be water tight, and any leaks or defects discovered must be repaired immediately. Any pipe, which has been disturbed after being laid, must be taken up, the joint cleaned and properly relayed as directed by the Engineer.

Lubricant used shall be as recommended by the pipe manufacturer.

B. Field-cut pipe must be beveled for insertion into the gasketed bell or coupling. Bevels can be made with a hand or power tool. Bevels shall be made to pipe manufacturer's specifications. If pipe manufacturers specifications are not available the bevel may be made at 15 degrees to the longitudinal axis of the pipe through one half (l/2) the wall thickness.

C. After pipe has been cut and beveled, a new full insertion mark located as recommended by the pipe manufacture shall be made using a felt tip pen. The contractor may determine the location of the insertion mark by measuring the mark location on a factory marked joint of pipe if manufacturer's specifications are not available.

2. JOINTING CORRUGATED STEEL PIPE

A. Gaskets for corrugated steel pipe shall be "O" Ring or sleeve types. Sleeve gasket shall be carefully placed on one joint of pipe. When the pipe is aligned and brought end to end the gasket shall be carefully centered over the joint between the ends of the pipe. "O" ring gasket shall be installed in accordance with the manufacturer's recommendation.

B. When "O" ring gaskets are furnished a flat gasket shall be furnished and placed between the overlapping portions of the band. The gasket shall extend the full width of the band and shall be of sufficient depth to assure a watertight joint.

C. The coupling band shall be carefully centered over the joints and tightened to the pipe manufacturer specifications. Care shall be taken during the tightening process to assure a snug uniform fit for the entire circumference of the pipe.

3. PROTECTING AND COVERING JOINTS

A. The contractor shall keep the ends of the pipe closed during the time of construction to prevent the entry of dirt, debris, small animals and other foreign objects.

B. Joints shall not be covered until approved by Engineer or his representative. Connections, which are for future use, shall be properly capped.

3.09 CONNECTIONS TO EXISTING STRUCTURES

A. Where shown on the plans, the contractor shall connect the new sewer to existing manholes. If no stub out is present in the existing manhole for such connection, the contractor shall construct such connection by making a hole in the side of the existing manhole using a coring machine or other approved method and installing a “KOR N Seal” boot as manufactured by N.P.C. Systems, Inc. or other approved water tight manhole connector.

The contractor shall use caution in constructing the connection to the existing manhole. Damage to the manhole that, in the opinion of the Engineer, would impair the use and/or function of the manhole shall be just cause to require the contractor to reconstruct the manhole at contractor’s expense. Such damage shall include but not be limited to cracking of the manhole riser section, spalling around the connection significantly reducing manhole wall thickness or excessive oversize in the opening for the new connection requiring any filler other than the manhole connector and/or non-shrink grout specified.

The contractor shall make such changes in the invert of the manhole as may be necessary to provide a smooth flow of the water through the manhole. Any connection to existing structures required in the Plans shall be accomplished by the Contractor and shall be incidental item with no direct compensation being made unless listed as a pay item in the bid proposal.

B. If the work consists of the construction of a sewer that is to replace an existing sewer, all of the existing service lines shall be kept in operation and connected to the new line.

C. Connections shall be made to all existing sewer lines in the vicinity of the work by removing a section of the sewer for the existing line and inserting in the space a tee branch of proper size, or by the construction of a manhole, regulator chamber of other structure as shown on the Drawings.

D. Connections to building services shall be made in a neat and workman like manner. Clean out plugs shall be installed wherever feasible, by making the connections with a standard wye or tee-wye. When clean out plugs are installed they should be located as near the right of way line as practical.

3.10 BACKFILL OPERATIONS

1. GENERAL

A. All pipeline excavations shall be backfilled in a manner that will restore pre-existing conditions as the minimum requirement and fulfill all supplementary requirements indicated in the Plans and Specifications. The backfilling operations shall be started as soon as conditions will permit on each section of pipeline, so as to provide continuity in subsequent operations and restore normal public service as soon as practicable on a section-by-section basis. All operations shall be pursued diligently, with proper and adequate equipment, to assure acceptable results.

B. For this specification backfill is defined as any material placed in the trench above the bedding zone other than the pipe or conduit and appurtenance.

For flexible pipe the backfill between the bedding material and the crown of the pipe shall be crushed stone suitable for encasement as specified in article 2.07 of the specifications. When Portland cement stabilized backfill is used above the pipe zone; the crushed stone encasement shall extend to 1' above the crown of the pipe.

C. Depositing of the backfill shall be done so the shock of falling material will not injure the structure. Grading over and around all parts of the work shall be done as directed by the Engineer.

D. Whenever soil types which are determined by the Inspector to be undesirable for backfill are excavated from the trench, such material shall be hauled away and deposited at locations shown on the plans or as directed by the Engineer at no additional compensation.

E. Backfill materials placed in the pipe zone shall be carefully placed in relatively uniform depth layers spread over the full width and length of the trench section in a manner and/or sequence that will provide simultaneous support on both sides of the pipeline. Each layer shall be compacted effectively, by approved mechanical of hand methods, until there is no further visual evidence of increased consolidation. Above the pipe zone the backfill material shall be placed uniformly across and along the trench in depth suitable for the compaction method used and compacted to a minimum of the density specified for the material used and the trench location. Compaction of the in place layer shall be completed acceptably before placing material for a succeeding layer thereon.

The manner of placement, layer thickness, compaction equipment, and procedure effectiveness shall be subject to approval of the Engineer. Water jetting or flooding shall NOT be used to compact trench backfill.

F. Compaction of materials placed within the pipe bedding and encasement zones shall be accomplished with portable or hand equipment methods, so as to achieve thorough consolidation under and around the pipe and avoid damage to the pipe. Above the pipe zone, the use of heavy roller type compaction equipment shall be limited to safe pipe loading.

G. The maximum loose thickness of each backfill layer placed above the pipe zone shall be 12 inches, except that 16 inches will be permitted for Granular Materials placed above an elevation one foot above the top of pipe, and with the provision that, by authority of the Engineer and in consideration of the demonstrated capability of special type vibratory compactors, these maximums may be increased at his discretion. “Hydro tamps”, “vibra tamps” or other heavy compacting equipment shall not be used until the backfill has reached a depth of four (4) feet above the top of the pipe.

H. All surplus or waste materials remaining after completion of the backfilling operations shall be disposed of in an acceptable manner within 24 hours after completing the backfill work on each particular pipeline section. Disposal at any location within the project limits shall be as specified, or as approved by the Engineer; otherwise, disposal shall be accomplished outside the project limits at the Contractor’s discretion. The backfilling and surplus or waste disposal operations shall be a part of the work required under the pipeline installation items, not as work that may be delayed until final cleanup.

I. For the duration of the warranty period of the project, the Contractor shall assume full responsibility and expense for all backfill settlement and shall refill and restore the work as directed to maintain an acceptable surface condition. All additional materials required shall be furnished without additional cost to the Owner.

2. BACKFILL IN PUBLIC RIGHTS-OF-WAY AND OTHER AREAS WHERE SETTLEMENT IS CRITICAL

A. GENERAL REQUIREMENTS

(1). Backfill above the pipe zone in public rights-of-way and under paved parking lots, near structures or other utilities where settlement can cause damage shall be made using Portland cement stabilized backfill or crushed stone screenings (crusher fines).

The pipe zone is defined as that portion of the trench extending from the bottom of the trench to 12” above the crown of the pipe or conduit.

(2) Backfill around structures such as manholes, junction boxes, transformer boxes and valve boxes shall be made using Portland cement stabilized backfill material or crushed stone screening (crusher fines).

(3) The minimum depth of stabilized backfill or crusher fines shall be twelve (12”) inches.

When utilities are being constructed under existing paving, the stabilized backfill or crusher fines shall extend from top of the pipe zone to the top of the base course.
When utilities are being constructed under existing unpaved streets that are not scheduled for immediate pavement construction, the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the existing roadway surface.

When utilities are being constructed in streets that are scheduled for immediate paving, the stabilized backfill or crusher fines shall extend from the top of the pipe zone to the bottom edge of the eight (8”) inches of subgrade, or, if the paving contractor has constructed a portion of the roadway prior to the construction of the utilities the backfill shall extend to the top of the course the contractor has finished, or the top of the base course, which ever is lower.

If the final course of asphaltic concrete has been placed, the street or alley surface shall not be cut for utility installation.

In streets where stabilized backfill is required only to the bottom of the subgrade course, the minimum depth of stabilized backfill may be reduced to six (6”) inches in which case the maximum depth of the “pipe zone” shall be limited to six (6”) inches above the top of the utility line or conduit.

B. BACKFILL MATERIALS

(1) Portland cement stabilized backfill shall consist of caliche base material, blow sand or native soil stabilized by the addition of Portland cement. Crushed stone or concrete aggregate shall NOT be used.

When Portland cement stabilized backfill is to be used, the contractor shall submit a mix design prepared by an approved commercial laboratory for approval before the trenching operation is begun. When native soil is to be used samples may be taken along the proposed route by boring or other approved means. Samples must be representative of the full trench depth.

The mix design shall be such that the minimum 7-day compressive strength is 150 psi when tested according to test method Tex 418-A.

The minimum cement content for Portland cement stabilized backfill shall be 1 sack per cubic yard.

Cement used in Portland cement stabilized backfill shall be Type I or Type II conforming to the requirements of ASTM Designation C150.

Caliche used for Portland cement stabilized backfill shall be crushed material conforming to Texas State Department of Highways and Transportation 1982 Standard Specifications for Construction of Highways, Streets and Bridges Item 248 Type F, Grade 2.

Blow sand used for Portland cement stabilized backfill shall be clean, free from organic matter, clay lumps, rock and other deleterious matter.

Native soil used for Portland cement stabilized backfill shall be clean, free of clods and organic matter, and free of rock in excess of 2”.

(2) Crushed stone screening (crusher fines) used for back fill shall be sharp grained particles of crushed stone conforming to the requirements of Article 2.07 of these specifications.

(3) Trencher excavated rock material shall be screened so that the largest diameter material is less than 2". The screened rock material used for backfill shall have sufficient moisture added so that the backfill will bind with the fines. The rock material backfill shall be tamped or compacted in two (2) foot lifts. A sheeps foot roller shall not be used unless there is two (2) feet or more compacted backfill above the pipe bedding.

C. BACKFILL CONSTRUCTION

(1) Portland cement stabilized caliche backfill or Portland cement stabilized native soil backfill may be constructed using either the "dry" method or the "wet" method.

(a) The dry method of stabilized backfill construction consists of dry mixing of the cement and caliche or soil to produce a homogenous mixture then adding and mixing sufficient water for proper compaction and hydration of the cement. The water content of the mixture will be approximately one to two percent above the optimum moisture for soil compaction. The mixing may be accomplished by using batch mixers or on the job site by "blade mixing" or other suitable method to produce the desired backfill material. The mixed material shall be placed in lifts of up to a maximum of 12 inches and compacted to ninety-five (95%) modified proctor densities by use of suitable compacting equipment.

(b) In the "wet" method of cement stabilized backfill construction, the materials shall be mixed in an approved concrete batching plant or mixer to the consistency of concrete and placed as concrete would be placed. The slump of the backfill material shall be such that all voids will be filled, approximately four (4") to six (6") inches. The backfill shall be consolidated by rodding or by the use of mechanical vibrators.

Portland cement stabilized blow sand backfill shall be mixed and placed by the "wet" method as described above.

Crushed stone screening (crusher fines) shall be wetted uniformly throughout with sufficient moisture to assure proper compaction before being placed in the trench. The moistened crushed stone screening (crusher fines) shall be placed in maximum lifts of twelve inches and consolidated using vibratory type compaction equipment except when it has been demonstrated that the compaction equipment employed will adequately compact deeper lifts in which case the maximum depth of a lift shall be limited by the capabilities of the equipment used.

Tests to determine the compacted density of the backfill shall be ordered by the Engineer if in his opinion the compaction is not adequate. Test showing a minimum compacted density of 90%-modified proctor will be deemed adequate.

3. BACKFILL OUTSIDE OF PUBLIC RIGHTS-OF-WAY WHERE SETTLEMENT IS NOT CRITICAL

A. In areas outside of public rights-of-way and in the absence of special work item requirements the backfilling shall be accomplished with the use of suitable materials selected from the excavated materials to the extent available and practical. Should the materials available from the trench section be unsuitable or insufficient, the required additional materials shall be furnished from outside sources at the Owners expense.

B. Suitable material shall be defined as a mineral soil reasonably free of foreign materials (rubbish, debris, etc.) frozen clumps, oversize stone, rock, concrete or bituminous chunks and other unsuitable materials, that may damage the pipe installation, prevent thorough compaction, or increase the risks of after settlement unnecessarily. Material selection shall be such as to make the best and fullest utilization of what is available, taking into consideration particular needs of different backfill zones. Material containing stone, rock, or chunks of any sort shall only be utilized where and to the extent there will be no detrimental effects.

C. The backfill material placed in this area shall be compacted by suitable means to a minimum density equal to the density of the undisturbed surrounding soil. City Engineer MUST approve water flooding as a means of compaction.

4. TRENCH BACKFILL BEHIND CURB AND GUTTER

A. When utilities are placed behind the curb in paved streets and other landscaped areas the backfill shall be the same as elsewhere in the right-of-way or other applicable location except that in grassed areas and in flower beds the top six (6”) inches of backfill shall be good quality top soil. When utilities are placed behind the curb in grassed or landscaped areas where no sidewalk is to be constructed and the edge of the trench is a minimum of 2 feet from the back of curb or where sidewalk is to be constructed and the minimum distance from both the back of curb and the edge of the sidewalk to the edge of the trench is 2 feet the contractor may elect to use suitable native soil for backfill. The native soil backfill shall be compacted to 95% modified proctor density to within 6” of the top of curb height. The top 6” of backfill shall be good topsoil and shall be compacted to the density of the adjacent soil.

B. Sidewalks shall be repaired by removing and replacing the complete section or sections that have been damaged. Strip patching through sidewalks will not be permitted.

The replacement sidewalk shall be of the same design and section as the walk removed and shall be of equal or better workmanship.

C. When utilities are placed in paved areas behind curbs the pavement shall be repaired as specified for street pavement.

D. Grassed areas and flowerbeds shall be restored as nearly as possible to the original condition. Care shall be taken to avoid damage to sprinkler systems.

Mail boxes and other appurtenance in the construction area. Any damage to said items shall be repaired immediately.

E. All repairs made behind the curb shall be to the satisfaction of the property owner responsible for their maintenance and/or to the satisfaction to the City Engineer.

3.11 INLET STRUCTURES AND LEADS AND CLEANOUTS FOR STORM SEWERS

A. Corrugated Galvanized Steel Slotted Drains for Nuisance water inlets only.

(1) Slotted drains shall be the sizes and lengths as shown on the plans and constructed at the locations as shown on the plans or at locations to be established on the job site.

(2) Slotted drains shall not be installed under asphalt pavement but shall have a section of concrete gutter constructed around it as shown on the detail drawings.

Slotted drains shall be protected from the entrance of debris, concrete or HMAC by closing the slot with one or two layers of heavy duct tape or similar material. In addition, the slot for slotted drain shall have a 2-½ inch or ¾ inch board attached to use as a guide for placing and edging the concrete.

Unless otherwise approved or directed by the Engineer the removal of tape and planking from the slotted drain should be accomplished as part of the final clean up.

B. Curb inlets, grate inlets and combination inlets

(1) General

Curb inlets, grate inlets and combination inlets may be pre-cast or cast-in-place at the contractor's option unless specifically shown otherwise on the plans and bid proposal.

(2) Pre-cast inlet boxes

(a) Construction and finish for pre-cast inlet boxes shall conform to details shown on the plans and all applicable requirements for pre-cast manholes.

(b) Tops for curb inlets and combination inlets may be cast in place or pre-cast. Extra care will be required in setting pre-cast tops to assure curb and gutter match.

(c) Pipe connections, bedding, setting and backfill for pre-cast inlets shall be in accord with the applicable requirements for pre-cast manholes article 3.12 of these specifications.

(3) Cast in place inlets

(a) Cast in place inlets shall be constructed of class "C" reinforced concrete as specified in item 1-B "Concrete for Structure" in these specifications.

(b) Forms for cast in place inlets shall be straight, clean and in good condition. Forms shall be properly cleaned and oiled before concrete is placed.

(c) Construction joints may be placed in cast in place inlets at locations shown on the plans. When construction joints are used, extra care will be required to assure that the joints are watertight.

(d) Cast in place inlets may be cast without outside forms if the soil conditions are such that true vertical walls can be cut and will stand during construction without sloughing or otherwise incorporation foreign materials into the concrete.

(e) When inlets are cast without outside forms, a plastic sheet lining may be required to prevent excessive loss of moisture from the concrete and/or to prevent incorporation of foreign material into the concrete.

A. Inlet Leads

(1) Inlet leads shall be constructed of corrugated steel pipe, PVC pipe or other material as called for on the plans and in the bid proposal.

(2) Construction of inlet leads shall be in accord with the applicable requirements for the type of pipe used.

(3) Junctions where two or more inlet leads are joined shall be made at clean outs or manholes.

B. Cleanouts

(1) Clean outs shall be constructed in accord with the plans and detail drawings.

(2) Construction and connections shall be in accord with the applicable specifications for construction of corrugated steel pipe manholes.

3.12 SANITARY SEWER SERVICES AND PLUGGED STUBS

A. Sanitary Sewer Services:

(1) On new sewer main construction all sewer laterals shall be constructed as part of the initial installation. Sewer wye fittings for sewer laterals in new construction shall be molded or fabricated with all gasketed connections. Four (4”) inch laterals shall be installed at all single-family residences and duplex. Laterals installed for apartment complexes, commercial and industrial areas shall be a minimum of six (6”) inches. Depth of laterals will be determined by depth of sewer main and applicable building codes. Laterals shall be installed using tee wyes or wyes and bends so that they will be at 90 degrees to the sewer main. Laterals shall extend to 3’ minimum beyond the property line of the served lot or tract. The contractor shall install sewer laterals according to the typical sewer lateral detail and the most current revisions of the Plumbing Code.

(2) Taps into existing lines shall use a gasketed fitting in conjunction with a full circle repair sleeve coupling, except that taps into existing ductile iron sewer may be made using the Genco Model DF sewer pipe saddle (The General Engineering Co., Frederic, MD Drawing No. R-3220-D dated 12/29/82) or approved equal.

(3) Cemented mitered connections without socket reinforcement shall not be permitted. The contractor will be permitted to use fittings, which are prefabricated, using pipe sections, molded saddles and PVC solvent cement, provided the solvent cement used in fabrication has cured for at least 24 hours prior to the installation. All solvent cement fittings shall e manufactured in the shop under controlled conditions.

(4) All caps and plugs shall be braced, staked, anchored, wired on or otherwise secured to the pipe to prevent leakage under maximum anticipated thrust from internal abnormal operating conditions or test pressures from water or air.

(5) It shall be the duty of the Contractor to keep a record of sewer service wye locations with respect to the nearest downstream manhole, but the Engineer will record ties on the end of all sewer services at the property line. When installing sewer services the Contractor shall, before backfilling, contact the Engineer or his representatives, and assist him in making ties to the end of the service in the open trench. At least two ties shall be made for each service, and if backfilling proceeds before such ties are made, the Contractor shall dig up the end of all such services, with no additional compensation, for the purpose of making ties. During backfilling the Contractor shall furnish and place a vertical steel post or 2 inch by 2 inch wooden stake set flush with finished ground surface, and extending down to the end of the sewer service, a nail shall be placed in the top of the stake to allow location of the service by metal finder.

(6) The main sewer service connection shall consist of installing an in-line wye section in the main sewer line at designated locations. Saddle wye installations will be permitted only when specifically called for. Orientation of service connection fittings shall be as shown in the standard drawings unless otherwise directed by the Engineer.

(7) Where the depth of cover over the main sewer invert is greater than 8 feet (or such other maximum as may be indicated), the service connection shall be extended outward then upward by use of bends to prevent excess loading on the sewer main in accordance with the details shown in the drawings.

(8) The Contractor shall provide the necessary wyes, tees and bends to bring the service to the proper place at the property line.

(9) Wherever service line connections to the main sewer are permitted or required to be made by the open cutout method in the absence of a built-in tee or wye fitting, the connection shall be made by using an approved type coring machine or by other approved methods producing a uniform, smooth circular cut-out as required for proper fit. The cutout discs shall be retrieved and shall not be allowed to remain within the main sewer pipe. The saddle tee shall be securely fastened to the main sewer pipe by means of epoxy resin or other approved adhesive. The entire connection fitting shall be encased in concrete to a minimum thickness of six inches and as may be shown in the standard drawings.

(10)Wherever service line connections to the main sewer are required to be made by means of built-in branch tee or wye fittings, the Contractor shall, in the absence of such fitting, remove a section of the main sewer pipe and replace it with the required branch tee wye or wye section connected by means of an approved sleeve coupling.

(11)Connections of service lines to the main sewer are required to be made by means of built-in branch tee or wye fittings, the Contractor shall, in the absence of such fitting, remove a section of the main sewer pipe and replace it with the required branch tee wye or wye section connected by means of an approved sleeve coupling.

(12)The end of all service connections shall be plugged with PVC plug and sealed with plastic joint material.

(13)Crushed stone bedding and backfill material, concrete encasement and protection, etc., for service line installation shall be the same as for the sewer lines.

(14)No service connections or laterals shall be covered until they have been inspected and located by the Engineer.

B. INSTALLATION OF PLUGGED STUBS ON SANITARY SEWERS

Plugged pipe stubs for future connections to manholes and sewerage structures shall be installed where shown on the Drawings or directed by the Engineer. The pipe stubs shall be installed in accordance with the specifications and details shown on the Drawings for connecting the type of pipe used to manholes.

3.13 MANHOLES

1. General

The manholes shall be constructed at the locations shown on the plans or as directed by the Engineer and in accordance with the details shown on the plans and as specified herein. After the excavation has been completed, the subgrade for the manhole base shall be graded and leveled. A crushed stone foundation having a minimum thickness of 6 inches shall then be placed on the subgrade. The crushed stone foundation shall be leveled and consolidated before the section of the manhole is placed. Pre-cast base sections shall sit in place level and plumb and to the lines and grade as shown on the plans. Cast in place bases shall be placed around the existing sewer line in accord with the plans and detail sheet. When pre-cast manhole bases are used, riser construction may proceed when the base is set on line and grade. When cast in place manhole bases are used, riser construction may proceed when the base has set sufficiently to support the weight of the riser.

Manholes shall be of the type and material shown on the plans and called for in the bid proposal and shall conform to these specifications.

All lift holes shall be filled with approved non shrink grout and bituminous material before final acceptance. Use of bituminous material or other flowable material alone to plug lift holes will not be permitted. Voids in the invert around the sewer pipe on the

inside wall of the manhole shall be grouted with cement rich grout, to conform to the rest of the wash, in accordance with the standard manhole details.

The backfill around the manhole shall be done in accordance with the details shown on the plans and trench backfill specifications.

The Contractor shall take whatever precautions necessary to protect the manholes that are under construction. At the end of the day or at such time as the Contractor deems necessary, all manholes not completed shall be covered, sealed, plugged, etc. to prevent the inflow of storm water or other objectionable material, and to prevent animals and humans from getting into the manhole.

2. PRE-CAST CONCRETE

A. Pre-cast tub bottom sections of manholes shall be set on a crushed stone foundation or bedding according to the details shown on the plans. Care shall be exercised to assure true alignment and grade for the pipe openings.

The invert of the manhole shall be constructed of cement rich grout and shall be formed to true lines; grades and curvature to assure smooth flow through the manhole. The invert shall have a steel trowel finish.

Joints for pre-cast concrete manhole riser sections shall be made Watertight by use of bitumastic or rubber sealers or “O” ring gaskets. Both sides of the tongue and groove joint shall be painted with a bitumastic primer before assembly.

The bitumastic or rubber sealer shall be clean and pliable and shall deform under the pressure of joint closure to assure a complete water tight seal. Care shall be exercised to assure proper alignment of the joint. The walls of the completed manhole shall be straight and vertical.

B. Pre-cast eccentric cone sections and precast slab manhole tops with eccentrically located manway shall be set with the manway adjacent to the up stream side of the manhole. The joints between the cone or slab top and the manhole riser shall be sealed in the same manner as the joints between the riser section. Care shall be taken in placing the cone and or slab tops to assure the manhole ring and cover can be set to match the finished paving.

C. Pre-cast grade rings will be used, when required, to bring the manhole ring and cover up to the finished grade. Grade rings may be set using cement rich grout or bitumastic seal and such as Ram-Nek or approved equal. When cement rich grout is used, care shall be taken that the space between the cone or slab top and the first grade ring and between the grade rings are completely filled without voids.

When bitumastic sealer is used the joints shall be constructed in the same manner as the joints between the riser sections.

When pre-cast manholes with PVC or other approved polymer lining are called for on the plans and bid proposal and are furnished under this contract they shall be constructed as other pre-cast concrete manholes.

In addition the joints in the lining shall be sealed by hot air welding, use of epoxy coating, or other approved means.

3. CAST IN PLACE MANHOLE BASES

A. Cast in place manhole bases shall be used only where shown on the plans or as directed by the Engineer and shall be constructed in accord with the details shown on the plans.

B. Special care shall be taken in casting the surfaces that will mate with the first risersection to assure a smooth even fit and a watertight joint.

C. The first riser section to be used with cast in place manhole bases shall be castwithout tongue or groove. The joint between the riser section and the cast in place base shall be sealed with a bitumastic or rubber sealant in the same manner as the joints in the pre-cast riser sections.

D. Care shall be taken in forming the invert of the manhole around existing sewers to assure adequate opening for the insertion of a “go – no go” mandrel or other testing equipment and cleaning tools.

4. MANHOLE RING AND COVER

A. The tops of the manhole frame and cover (ring) shall be built to the grade shown on the plans. The cast iron frame shall be firmly embedded in mortar.

B. When pressure type manhole rings and cover are specified on storm sewer manholes they shall be bolted to the concrete slab top using the “L” bolts cast into the slab for this purpose. The joint between the ring and the concrete slab top shall be made watertight using a bitumastic or rubber seal and conforming to the requirements of these specifications.

5. CORRUGATED STEEL MANHOLES

A. Corrugated steel manholes shall be constructed in accord with the details shown on the plans and in accord with the applicable requirements for the construction of corrugated steel pipe sewers.

B. Care shall be taken during the placing of backfill around corrugated steel pipe manholes to maintain the horizontal and vertical alignment of the manhole.

C. Since full contact of the flat top slab with the cement stabilized backfill is critical the backfill shall be finished smooth and to the proper grade. A thin layer of cement rich grout shall be placed on the cement stabilized backfill immediately prior to placing the concrete slab top. The grout shall be sufficient t fill all voids between the backfill and the slab and of a consistency to be forced into the voids under the weight of the slab.

3.14 TESTING GRAVITY SEWER MAINS AND MANHOLES

A. Upon completion of the sewer construction including all wyes and service laterals and before any house drains or services are connected, all sewers shall be cleaned and lamped. All runs of sewer between manholes shall be straight and true. Leakage tests shall be made to determine the amount of ground water infiltration into the sewers. Infiltration tests shall be made when groundwater level is 18 inches or more above the top of the outside of the pipe. Measurement will be taken by means of a weir placed in the lines. The maximum allowable rate of leakage shall be 25 gallons per inch diameter per mile of pipe per 24 hours, for any section of pipe with a maximum total leakage of 200 gallons per mile per 24 hours for sanitary sewers with the exception that the maximum leakage for storm drains shall be 200 gallons per inch of diameter per mile per 24 hours with a total maximum leakage of 6,000 gallons per mile per 24 hours.

When the groundwater is not at sufficient height for infiltration testing the Contractor shall use exfiltration to test the sewer lines.

B. In lieu of the infiltration or exfiltration tests the Contractor may perform air tests on the sewers.

C. If the infiltration, exfiltration, or air tests fail to meet requirements specified herein, the Engineer reserves the right to request television work to be done to locate leaks. The Contractor shall furnish all materials and equipment necessary to accomplish all infiltration, exfiltration, air or television testing.

The Contractor shall receive no additional compensation for this testing or inspection work or for repairs of corrective work required to be done to the sewers. The exfiltration tests shall be used in areas where no ground water is present.

D. Test Procedure Hydrostatic (Exfiltration)

(1) The test section shall be bulk headed and the pipe subject to a hydrostatic pressure produced by a head of water at a depth of three (3) feet above the invert of the sewer at the upper manhole under test. In areas where ground water exists, this head of water shall be three feet above the existing water table.

(2) This head of water shall be maintained for a period of one hour during which it is presumed that full absorption of the concrete manhole body has taken place and thereafter for a further period of one (1) hour for the actual test of leakage. Fiber glass manholes are exempt from the one hour absorption requirement. During this one (1) hour test period, the measured maximum allowable rate of exfiltration for any section of sewer shall be the same as allowed for the infiltration test.

E. TEST PROCEDURE AIR

(1) Where the Contractor elects to air test, he shall perform these tests with equipment similar to Air-Loc equipment manufactured by Cherne Industrial, Inc. Hopkins, Minnesota.

(2) The air test shall be made when the sewer is clean. The line shall be plugged at each manhole with pneumatic balls. Low pressure air shall be introduced into the plugged line until the internal air pressure reaches 4.0 psig greater than the average

back pressure of any ground water pressure that may submerge the pipe. At least two (2) minutes shall be allowed for the air temperature to stabilize before readings are taken and the timing started.

(3) When testing pipes 14 inches and less in diameter between consecutive manholes, the portion being tested shall pass if it does not lose air at a rate to cause the pressure to drop from 4.0 to 3.0 psig (greater than the average back pressure of any groundwater that may submerge the pipe) in less time than listed as calculated from Table 1.

When testing pipes greater than 15 inches in diameter between consecutive manholes the portion being tested shall pass if it does not lose air at a rate to cause the pressure to drop from 3.5 psig 3.0 psig (greater than the average back pressure of any groundwater that may submerge the pipe) in less time than that shown in or calculated from Table II.

TABLE I
Specification Time Required for a 1.0 PSIG Pressure Drop for Size and Length of Pipe indicated for Q = 0.0015

Specification Time for Length (L) Shown (min: sec)											
1	2	3	4 (xL)	100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.	400 ft.	450 ft.
4	3:46	597	.380	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854	5:40	5:40	5:40	5:40	5:40	5:40	5:42	5:42
8	7:34	298	1.520	7:34	7:34	7:34	7:34:	7:36	8:52	10:08	11:24
10	9:26	239	2.374	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21	19:50	114	10.470	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:40	99	13.674	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	25:30	88	17.306	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48
30	28:20	80	21.366	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15
33	31:10	72	25.852	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53
36	34:00	66	30.768	51:17	75:55	102.34	128:12	153:50	179:29	205:07	230:46

1. Pipe Diameter (in.)
Minimum Time (min:sec)
Length for Minimum Time (ft.)
Time for Longer Length (sec)

NOTE: When using column 4 multiply the number in column 4 opposite the pipe diameter by the length of pipe of that diameter and sum the times for the various pipe size in the run being tested. Computations shall include lengths for service connection laterals.

Table II
Specification Time Required for 0.5 PSIG Pressure Drop for Size and Length of Pipe Indicated for Q + 0.0015

Specification Time for Length (L) Shown (min: sec)											
1	2	3	4 (xL)	100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.	400 ft.	450 ft.
4	1:53	597	.190	1:53	1:53	1:53	1:53	1:53	1:53	1:53	1:53
6	2:50	398	.427	2:50	2:50	2:50	2:50	2:50	2:50	2:51	3:12
8	3:47	298	.760	3:47	3:47	3:47	3:47	3:48	4:26	5:04	5:42
10	4:43	239	1.187	4:43	4:43	4:43	4:57	5:56	6:55	7;54	8:54
12	5:40	199	1.709	5:40	5:40	5:40	7:08	8:33	9:58	11:24	12:50
15	7:05	159	2.671	7:05	7:05	8:54	11:08	13:21	15:35	17:48	20:02
18	8:30	133	3.846	8:30	9:37	12:49	16:01	19:14	22:26	25:38	28:51
21	9:55	114	5.235	9:55	13:05	17:27	21:49	26:11	30:32	34:54	39:16
24	11:20	99	6.837	11:24	17:57	22:48	28:30	34:11	39:53	45:35	51:17
27	12:45	88	8.653	14:25	21:38	28:51	36:04	43:16	50:30	57:42	46:54

30 33 36	14:10 15:35 17:00	80 72 66	10.683 12.926 15:384	17:48 21:33 25:39	26:43 32:19 38:28	35:37 43:56 51:17	44:31 53:52 64:06	53:25 64:38 75:55	62:19 75:24 89:44	71:13 86:10 102:34	80:07 96:57 115:23

1 Pipe Diameter (in.)
2 Minimum Time (min:sec)
3 Length for Minimum Time (ft.)
4 Time for Longer Length (sec)

NOTE: When using column 4 multiply the number in column 4 opposite the pipe diameter by the length of pipe of that diameter and sum the times for the various pipe size in the run being tested. Computations shall include lengths for service connection laterals. All service plugs shall be secured in place to prevent displacement during testing operation.

F: DEFLECTION TEST

Deflection tests shall be performed on all flexible pipe, the tests shall be conducted after the backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5 percent. The deflection tests shall be run using a Go-No-Go mandrel having a diameter equal to 95 percent of the inside diameter of the pipe. The tests shall be performed without mechanical pulling device, any pipe not meeting the deflection test shall be excavated and re-bedded at no cost to the owner.

The Contractor at no additional cost to the owner shall furnish the Go-No-GO Mandrel.

Upon completion of all tests, the Contractor shall provide personnel to remove each manhole cover in the presence of the Engineer's representative for inspection and depth measurement.

G. TESTING SANITARY SEWER MANHOLES

All sanitary sewer manholes shall be tested for water tightness by one of the following methods.

Manholes, except those in streets scheduled for immediate paving, shall be complete, having all adjusting rings and cover rings in place and shall be backfilled prior to testing.

Manholes in streets scheduled for immediate paving shall be complete as described above except those acceptance tests shall be made at the top of the cone section.

(1.) Vacuum Test

a. General

This item will govern the testing of all sanitary sewer manholes. All connections to manholes including drop connections shall be in place before testing.

b. Equipment

Equipment for vacuum testing manholes shall be:
MANHOLE VACUUM TESTER as manufactured by:

P.A. Glazier, Inc.
P.O. Box 1002
Worcester, MA. 01613

Or

THE CHERNE AIR-LOC MANHOLE TESTER as manufactured by:

Cherne Industries, Inc.
5700 Lincoln Dr.
Minneapolis, MN 55436-1695

Or approved equal.

c. Preparation for Testing

All connections to the manhole; except plugged stubs for future line extensions, shall be plugged using suitable pneumatic plugs. Line plugs shall be placed at a point outside of the manhole wall (approximately 8" to 10" into the sewer pipe). Drop connections shall be plugged at a point up stream from the drop.
All plugs, pipe connections and plugged stub outs shall be adequately braced to prevent them being drawn into the manhole when vacuum is applied.

d. Testing

The contractor shall set the test equipment in place and operate it in accord with the manufacturer instructions. A copy of these instructions shall be kept on the job site and shall be available to the inspector when tests are performed. When equipment is properly set up a vacuum of 10" of mercury (Hg) shall be drawn and the vacuum line valve closed. After the vacuum pump is shut off the hose shall be disconnected before the test is started.

Note: Vacuum must be at 10" Hg when test is started. The contractor may wish to draw up to 10.5" Hg vacuum and then bleed back to 10" Hg before starting the test. The test shall pass when the minimum time for the vacuum to drop from 10" Hg to 9" Hg is greater than the time shown in the following table:

TABLE 1: Minimum test times for various manhole diameters.

	DIAMETER		
Depth Feet	48"	60"	72"
8'	0:20	0:26	0:33
10'	0:25	0:33	0:41
12'	0:30	0:39	0:49
14'	0:35	0:46	0:57
16'	0:40	0:52	1:05
18'	0:45	0:59	1:13
20'	0:50	1:05	1:21
* ADD	0:05	0:06.5	0:08

Any manhole that fails the test shall be repaired and retested until it passes the test.

e. Contractors Optional Test

The contractor, at his option may wish to test manholes before they are backfilled to assure himself that the manhole is sound.
Manholes that fail the test prior to being backfilled may be repaired under vacuum by coating the area of the leak with a liquid quick setting grout allowing the grout to be drawn into the opening until the leak is stopped.

Manholes will not be accepted on the bases of this test.

f. Fiberglass Manholes

Fiberglass manholes may be tested in the same manner as concrete manholes except that all repairs to the fiberglass body of the manhole shall be made using materials furnished by the manufacturer. Repairs shall be made in accord with the manufacturer instructions.

g. No separate payment will be made for vacuum testing of manholes, but the cost shall be considered incidental to furnishing and construction of manholes as bid in the bid proposal.

2. HYDROSTATIC TESTING

a. General

This item shall govern the hydrostatic testing of manholes and may be used as an alternative to vacuum testing by the contractor.

All connections to manholes including drop connections shall be in place prior to testing manholes.

b. Testing

All connections to the manhole, except plugged stubs installed for future line extensions, shall be plugged upstream from the drop.

Plugs in pipe connections must be placed outside the manhole wall (approximately 8” to 10” into the pipe).

The manhole shall then be filled to the top of the cast iron ring (or top of the cone section for manholes in streets scheduled for immediate paving) and allowed to stand for a minimum of one hour to allow for absorption by the components of the manhole. The inspector may extend the absorption period if it appears that the manhole has not reached a stable state.

The manhole shall then be refilled to the top of the ring (or cone) and allowed to stand for up to 24 hours.

The manhole shall be checked at the end of 4 hours and will be deemed to have passed if no perceptible loss has occurred – if loss has occurred the manhole will be checked after the 24 hour period and will be considered to have passed if loss does not exceed the following schedule

Depth Ft.	Loss Inches
0 - 10’	.2
10 – 20’	.4
20 - 30’	.6

c. No separate payment will be made for Hydrostatic Testing of manholes but the cost shall be considered as incidental to furnishing and constructing manholes as bid in the bid proposal.

H. TELEVISING NEW SEWER LINES

It is the city’s intention to televise all new sanitary sewer lines for record purposes.

Immediately after the contractor completes all testing of sanitary sewer lines and manholes he shall leave all manholes accessible for televising and make allowances for the city’s camera crews working on the project site.

The contractor at his own expense before final acceptance must correct any defects discovered during the televising of sanitary sewers.

3.15 RESTORATION

A. Whenever any surface improvements such as pavement, curbing, pedestrian walks, fencing, or turf have been removed, damaged or otherwise disturbed by the Contractor’s operations, they shall be repaired or replaced to the Engineers satisfaction, to restore the improvement in kind and structure to the pre-existing condition. Each item of restoration work shall be done as soon as practicable after completion of installation and backfilling operations on each section of pipeline.

B. In absence of specific payment provisions, as separate Contract Items, the restoration work shall be compensated for as part of the work required under those Contract Items, which necessitated the destruction and replacement or repair, and there will be no separate payment therefor. If separate pay items are provided for restoration work, only that portion of the repair or reconstruction, which was necessitated by the contract, will be measured for payment. Any improvements removed or damaged unnecessarily shall be replaced or repaired at the Contractor’s expense.

C. Turf restoration shall be accomplished by sod replacement except where seeding is specifically allowed or required.

Caliche or gravel surfaced streets and driveway shall be restored to their original condition by salvaging and replacing the pre-existing caliche or gravel. If the Contractor does not salvage sufficient material during excavation operation, he will be required to furnish material to restore the surface to the depth of the original section. This caliche or gravel restoration shall be considered a part of excavation and backfill and no extra compensation will be made.

E. Bituminous and concrete surfaced streets and driveways will be restored to equal or better condition than existed prior to sewer construction. Measurement will be made of the actual quantities required to be replaced by the sewer construction and paid for at the price bid in the appropriate bid items in the proposal.

No measurement or payment will be made for work done outside the lines considered necessary for sewer construction. The Contractor will be required to replace damage outside these lines at his own expense.

F. Reconstruction of caliche base courses and concrete or bituminous surface courses shall be in substantial compliance with all applicable City of Midland Specifications pertaining to the item being restored.

3.16 CLEANUP

After completing each section of the sewer line, the Contractor shall remove all debris, construction materials, and equipment from the site of the work, grade and smooth over the surface on both sides of the line and leave the entire right-of-way in a clean, neat, and serviceable condition. No separate compensation shall be made for clean up.

3.17 PAYMENT

A. General

Payment in accordance with the following items, at the unit price bid for the work, shall constitute full and complete payment for the entire project including all incidental terms necessary for the complete and successful prosecution of the work in accordance with the intent of the plans and specifications.

Materials and work required to complete the project for which there is no bid item in the bid proposal shall be considered as incidental and the cost shall be included in the prices bid for the various items in the bid proposal.

Where payment is to be made on a unit price basis, it shall be made on the actual measured quantities as constructed in the work.

B. Sewer Pipe in Place

Unit prices bid shall cover furnishing and installation of pipe and jointing materials, including tests and all other necessary work and material to install the pipe complete in place at the depth specified. The unit of work shall be the lineal foot of the various types and sizes as shown in the proposal form. The pipe installation shall be measured

along the centerline of the sewer from center to center of manholes with no deduction in footage for manholes, wye branches, riser bases or other structure.

C. Foundation Corrections Materials

Payment for foundation correction materials shall be made at the unit price bid per cubic yard for material furnished and placed to pro vide adequate pipe base in unstable soil. The unit price shall include extra excavation below pipe grade, the material, placing and tamping.

Additional material required to backfill excess depth of excavation caused by neglect or error on the part of the Contractor or wet conditions, shall be furnished and placed at his own expense.

Removal of Street Surfacing

The Contractor shall receive no extra compensation for the removal of street surfacing including cutting of a straight edge.

E. Trench Safety Systems, Sheeting and Shoring

Measurement: Trench Safety Systems shall be measured by the linear foot of "Trench Safety Systems": Payment for work prescribed under this item shall be full compensation for the Trench Safety Systems including any Engineering and/or consulting fees and any additional excavation and backfill required, for furnishing, placing, maintaining and removing all shoring, sheeting, or bracing; for de-watering or diversion of water; for all jacking and jack removal; and for all other labor, materials, tools, equipment and incidentals necessary to complete the work.

F. Manholes

Payment will be made for the various types of manholes at the unit prices bid for the various types of manholes 0 to 6' deep which price shall include excavation, furnishing and installing all materials pumping where necessary, and backfilling and all incidentals for the complete manhole in place. Measurement for manholes over 6 feet in depth shall be made of the depth of manhole in excess of six (6) feet. Manholes will be measured from the invert to the top of the casting as set.

Payment will be made for the manhole depth in excess of 6 feet at the vertical foot price bid in the bid proposal for extra depth of manhole over 6 feet for each type of manhole furnished.

G. Drop Connections to Manholes

Payment shall be made for drop connections to manhole for each drop connection made as counted in the field at the price bid in the proposal.

Said payment shall be complete compensation for furnishing all materials and fittings and making all connections to the manhole including 2' of vertical depth as measured from the invert of the incoming line to the invert of the manhole.

H. Drop Section for Manholes

Drop sections shall be paid for on a vertical footage basis as measured from the invert of the incoming line to the invert of the manhole less 2 feet and shall be paid for at the price bid per vertical foot for the various size drop connections in the bid proposal.

The price bid per vertical foot includes all fittings, granular material, if used and concrete and shall be full compensation for the complete in service drop connection.

I. Service Lines

Service lines will be measured from centerline of the sewer main to the plug end and paid for at the unit price bid per linear foot of each type of pipe as specified and as shown on the typical details.

J. Barricading and Traffic Control

The lump sum price bid in the bid proposal shall be full compensation for furnishing flag persons when required and all barricades, signs and other barricading and traffic control devices and for furnishing barricading plans and erecting and maintaining all such devices and signs as required for the duration of the period.

Updated
08/07

MIDLAND
Engineering Services

ADDENDUM #01

Project Number BPU19-05

TO ALL BIDDERS ON THE SUBJECT BID: Solomon Lane Paving Bond Project

ADDENDUM #01

DATE: June 24, 2022

1. Q/A and Clarification
2. Revised Proposal
3. Revised Pay Notes
4. Revised Construction Drawing Sheets 37 and 64
5. Add Construction Drawing Sheet 64A
6. Non-Mandatory Pre-Bid Meeting Agenda
7. Non-Mandatory Pre-Bid Meeting Attendance

PLEASE RETURN THIS ADDENDUM WITH YOUR BID BY THE CLOSING DATE.

All other terms and conditions shall remain the same.

Permian Paving Inc.
Company Name

John McDonald II
Bidder Authorized Signature

June 25 2022
Date

JOHN McDONALD II
Please Print Above Name

432-425-1214
Phone

www.MidlandTexas.gov

Engineering • 300 N. Loraine, Midland TX 79701 • 432-685-7286

Solomon Lane Paving Bond Project
Project Number BPU19-05

Q/A and Clarification

During the Pre-Bid Meeting, the following questions were raised by one or more bidders. Below is a list of the questions along with the answers and clarifications.

Clarification: This Addendum 01, issued on Friday, June 24, 2022, is the first of two addendums that will be issued for this Solomon Lane Paving Bond Project. A second addendum, Addendum 02, will be issued by the City of Midland on July 8, 2022 after the Noon deadline on that same day that is described in the clarification following this one.

Clarification: **The deadline to ask questions for addendums is hereby extended to Friday, July 8, 2022 at Noon.** Questions asked prior to this new deadline that were not addressed in this Addendum 01 will instead be addressed in Addendum 02. Any corrections needed to answers previously provided in Addendum 01 will also be made in Addendum 02. Questions asked after the new Noon deadline will be directed to the information already provided in the revised bid documents, Addendum 01, and Addendum 02.

Clarification: **The Bid Opening date is hereby moved to Wednesday, July 13, 2022 at 2:00 PM.** All other information, requirements, etc. regarding the bid submittal process remain the same as originally described in the bid documents.

Clarification: All addendum acknowledgement forms must be included with the bid for the bid to be considered complete. This includes addendum acknowledgement forms for both Addendum 01 and Addendum 02. Bidders have sole responsibility for making sure they have and acknowledge all addendums provided for this project bid.

Clarification Construction drawing sheets 37 and 64 from the original construction drawing bid set have been revised. The revisions include additional dimensions at driveways and adding a new mailbox foundation detail. The revised plan sheets 37 and 64 are attached to this Addendum 01. Bidders are to remove all previous versions of the plan sheets 37 & 64 in their entirety from the original construction drawing set and replace them with the attached plan sheets 37 and 64.

Clarification Construction drawing sheet 64A is hereby added to the construction drawing bid set by this Addendum 01. This new construction drawing sheet includes additional mailbox foundation details. The additional construction drawing sheet 64A is attached to this Addendum 01. Bidders are to attach construction drawing sheet 64A to the back of the construction drawing bid set after the revised sheet 64.

Clarification: The Proposal section of the Bid Packet has been revised.

The original Storm Drain Bid Items 2 and 3 have been removed and replaced with the new Storm Drain Bid Items 2, 3, 4, and 5. The original Storm Drain Bid Items 4

and 5 have been renumbered as Storm Drain Bid Items 6 and 7. Pay Note references for all revised Bid Items have been updated.

The original Traffic Bid Items 1, 2, 3, 4, 5, and 6 have been revised to correct quantity errors and description errors. The corresponding Pay Notes T1, T2, T3, and T4 have also been revised as needed to match revisions to the corresponding Traffic Bid Items.

Remove the original Proposal section in its entirety and replace it with the revised Proposal section attached to this Addendum 01.

Clarification: The Pay Notes section of the Bid Packet has been revised.

The original Storm Drain Bid Items 2 and 3 have been removed and replaced with the new Storm Drain Bid Items 2, 3, 4, and 5. The original Storm Drain Bid Items 4 and 5 have been renumbered as Storm Drain Bid Items 6 and 7. Pay Note references for all revised bid items have been updated. There were no revisions made to the original language of the storm drain Pay Notes themselves.

The original Traffic Bid Items 1, 2, 3, 4, 5, and 6 have been revised. The corresponding Pay Notes T1, T2, T3, and T4 have also been revised as needed to match revisions to the corresponding Traffic Bid Items.

Remove the original Pay Notes section in its entirety and replace it with the revised Pay Notes section attached to this Addendum 01.

Clarification: The Pre-Bid Meeting Agenda should have indicated that Addendum 01 would be issued this Friday, June 24, 2022 at Noon rather than on July 1, 2022 at Noon. This was identified and verbally corrected in the Pre-Bid Meeting held on Wednesday, June 22, 2022 at 3:00 PM.

Clarification: Contractor must be willing to sign contract as is.

Clarification: Check that all insurance forms are in order when submitting bids.

Clarification: Check that all conflict of interest forms are completed if applicable.

Clarification: Contractor must fill out all bid items in the Proposal for the bid to be considered complete.

Clarification: Contractor is responsible for all construction staking and surveying during this project.

Clarification: Contractor is responsible for all traffic control during this project as outlined in the bid documents. Contractor will be responsible for submitting traffic control plans to the City of Midland for review and approval. Contractor must notify property owners at least two (2) business days in advance prior to any planned access interruption.

Contractor is responsible for maintaining access to all adjacent properties at all times in accordance with the Bid Packet's Special Provisions section, barring those times when actual construction activity necessary to complete the work is taking place in front of driveway approaches or similar points of access. When such work is not occurring then access must be restored by means of traffic rated steel plates or other equivalent means until such time as the work is completed.

Special consideration is to be given to access on the Lazywood Lane and Weeping Willow Lane cul-de-sacs as per the direction provided in the Special Provisions section of the bid packet, part 9. PROPERTY AND RIGHT-OF-WAY ACCESS.

Special consideration is to be given to the gated community on the west side of the 'A' Street intersection. This subdivision does not have a second point of ingress/egress for vehicle traffic, and so access to the gated entrance at 'A' Street must be maintained at all times.

Clarification: The entrances to Lazywood Lane and Weeping Willow Lane are relatively narrow compared to typical City streets and flanked by decorative brick columns on either side of the existing pavement. The Contractor is to take care not to damage the existing brick columns and will have sole responsibility for any repairs needed due to damage during construction.

Clarification: Utility covers matching City Details are now available. All utility covers and cover patterns are to match the City standard details.

Clarification: Saw-cutting is considered subsidiary to the bid items listed in the Proposal.

Clarification: The Contractor is reminded to verify all existing conditions before starting demolition, excavation, or construction activities.

Clarification: The City of Midland will remove or relocate any existing traffic signs as needed due to conflicts with the project's construction, and will also handle the installation of any new street signs. The Contractor is responsible for coordinating with City Transportation prior to the traffic sign removal, relocation, or installation taking place.

Clarification: For this project there are several locations with street crown transitions or street cross-section that are not typical for the City of Midland. This was done deliberately for this project to address existing field conditions and to keep driveways and street intersections traversable for vehicle traffic.

Clarification: All invoice submittals are to be itemized and are to match the Proposal items listed.

Clarification: There is a one (1) calendar year warranty period on this project. This warranty period does not start until all improvements for this project have been accepted by the City of Midland.

Clarification: It is recommended that Bidders use the USPS mailing address rather than the physical City Hall address for bid submittals that are mailed in as the physical address has experienced issues on occasion in the past. The USPS mailing address is unchanged from what is listed in the original bid packet and the pre-bid meeting agenda.

Question: There's a bid item for Safety End Treatments (SD3) showing 12 EA. There's only 6 EA for the 4'X2' box culverts and 2EA for the 12" RCP. If so, shouldn't this be two different bid items?

Answer: The Proposal and Pay Notes have been corrected in the revised Proposal attached to this Addendum 01, including the Storm Drain Bid Items for headwalls and safety end treatments.

Question: What is the side slope for the SET's?

Answer: Dimensions have been added to sheet 37 for the pipe culvert length so that the length and height of the headwall structure can now be determined, and that in turn dictates what the side slope dimension will be for these structures.

Question: Is the headwall item (SD2) 12EA for the trench drains? If so there's only 10 EA (5 locations). Can you supply a detail for the headwall?

Answer: The Proposal and Pay Notes have been corrected in the revised Proposal attached to this Addendum 01, including the Storm Drain Bid Items for headwalls and safety end treatments. The trench drains do not have headwalls as part of their design however, and so there is no detail to be provided in those cases.

Question: The bid item to relocate the mail box foundation indicates to remove the existing foundations and construct new ones. Do you have a detail for the new foundation?

Answer: The revised construction drawing set's Sheet 64 and new Sheet 64A include mailbox foundation details. Owner's whose mailboxes are in conflict with the project construction will have the option to either have a new concrete mailbox foundation set as indicated in Detail D12 on Sheet 64, or a mailbox mounting assembly set as indicated in Details MB(1) – 21, MB(2) – 21, MB(3) – 21, and MB(4) – 21 on Sheet 64A, or finally to decline to have the foundation set through this project and to instead set or not set a new foundation themselves. The Contractor will be paid the same regardless of which of these options the mailbox owner choses, even if the Contractor only removes the existing mailbox foundation and is not required to set a replacement.

Question: Do you know the depth of the existing hot mix?

Answer: The existing hot mix is 2" – 4" thick.

Question: The bid quantity for the 4' X 2' box culvert is 120LF but there's only 105 LF (22.5' + 22.5' + 60')?

Answer: Most pipe and culvert sections tend to come in standard lengths that are then cut on site to fit the design dimensions. It is also not uncommon for City projects to discover during construction that a few additional feet of pipe or culvert may be required once excavations are complete and the underground conditions are fully exposed. For these reasons it is a common practice for the City to round pipe and

culvert quantity lengths up to at least the nearest 20'increment in the Proposal, as that is the typical length that many pipe segments are made to.

Question: How many lbs. of fibers per cubic yard is needed in the concrete items? 'A' street was 3# of fibrillated fibers per cubic yard will this be the same?

Answer: Per Construction Note 4 on Sheet 2 of the construction drawing set, there should be 3.0-pounds of fiber reinforcement per each 1.0-cubic yard of concrete placed unless otherwise noted in the construction drawing set.

Question: The demo plan states to remove and salvage the street signs. I guess reinstalling will be by others?

Answer: The City of Midland will remove or relocate any existing traffic signs as needed due to conflicts with the project's construction, and will also handle the installation of any new street signs. The Contractor is responsible for coordinating with City Transportation prior to the traffic sign removal, relocation, or installation taking place.

Question: On Storm bid Item number 2, are there 12 EA headwalls or 6 EA? On the plans it looks like there is only one called out for each side of the three runs of RCB but bid quantity is 12. Please confirm.

Answer: The Proposal and Pay Notes have been corrected in the revised Proposal attached to this Addendum 01, including the Storm Drain Bid Items for headwalls and safety end treatments.

Question: On storm bid Item number 3, are there 12 EA SETs or 2 EA, one for each end of the RCP in the driveways on sheet 36? Please confirm.

Answer: The Proposal and Pay Notes have been corrected in the revised Proposal attached to this Addendum 01, including the Storm Drain Bid Items for headwalls and safety end treatments.

Question: Is the Contractor supposed to put back the xerascape next to the roadway?

Answer: Yes. Typically, in situations like these the Contractor will push the existing xeriscape material off to one side while the project construction work is taking place, and then pull the xeriscape material back into place once that work is complete, or in this case pull the xeriscape material back to the new road pavement edge.

Question: Is the Contractor supposed to replace existing irrigation systems if they are damaged? There is nothing in the Proposal that covers this.

Answer: No. Existing irrigation systems within the designated project work areas that are damaged will be handled separately by the City of Midland. However, the Contractor is expected to coordinate with the City Inspector and property owner prior to starting construction in front of a property with an existing irrigation system in case the owner wants to take preemptive action of their own to minimize the potential impact to their system, such as by isolating the portion that might be at risk within the project area from the rest of their irrigation network. Additionally, if the Contractor damages existing irrigation systems outside the designated project work areas, which includes anything outside the public Rights-of-Way, then that damage

and the cost of repairing it are solely the responsibility of the Contractor and will not be paid for or addressed through this project.

Question: Traffic controls are difficult to bid without a traffic control plan included with the plan set. Have to rely on the barricade companies to know the area and Midland traffic.

Answer: Traffic control plans will not be provided by the City of Midland for this project, and Contractors are directed to follow the directions regarding traffic controls and traffic control plans provided in the construction drawings and bid documents. Historically the City of Midland has not provided traffic control plans for its project, and when at times they were provided in the past the barricade companies always ignored them and submitted their own traffic control plans instead, making the time and effort on the City's part to generate traffic control plans completely pointless.

Question: Will street closures be allowed for this project?

Answer: Full closures of sections of Solomon Lane will be allowed so long as all residents that utilize Solomon Lane for access still have at least one means of vehicle ingress and egress to their property. Full closures of Lazywood Lane and Weeping Willow Lane are not preferred, but the City of Midland recognizes the unique challenges associated with paving these two cul-de-sacs and will coordinate with the Contractor and local residents to find the best options that can reasonably be implemented.

Question: There's a lot of nice landscaping, mailboxes, and fancy driveways that will be in the way of this project.

Answer: The City of Midland has been communicating with residents about the construction work along Solomon Lane for over a year now, including during the construction of the utility project currently taking place along this same section of Solomon Lane. Residents have been alerted that certain mailboxes, driveway features, and landscaping will have to be removed to make way for the roadway improvements, and thus far there has not been any objection to this once the project was explained in more detail to residents who had questions. The City will coordinate with the Contractor and property owners as much as possible to minimize the impact to residents while keeping the paving project on track as designed.

Question: Has the geometry of any of the driveways been changed as part of this project?

Answer: Yes. The degree of change varies from driveway to driveway, but it is safe to say that the geometry of every driveway along Solomon Lane will be altered by this project. This should be less prevalent on Lazywood Lane and Weeping Willow Lane as the new road and existing road elevations are a closer match to one another, but driveways near the northern ends of these two cul-de-sacs may still need smaller adjustments once the final road grades are set.

Question: What are the vegetation and watering requirements? Hard to bid that.

Answer: Vegetation and watering requirements are described in the VEGETATOIN AND SEEDING NOTES found on Sheets 53 – 55 of the construction drawing set, and include seed mixtures, preservation of top-soil, fertilizer application, watering amounts and frequency, etc.

Question: Can we push back the bid open date? TxDOT has three project bids that same week, and there is another project bid opening the following week for the City.

Answer: The Bid Open date has been moved to Wednesday, July 13, 2022 at 2:00 PM. All other information, requirements, etc. regarding the bid submittal process remain the same as originally described in the bid documents.

Question: It would be easier to have everything answered in the first addendum if possible. Sometimes we have questions about the answers that are provided.

Answer: All questions asked up until Noon on June 24, 2022 have been included and addressed in this Addendum 01, and all revisions to the project's bid documents and construction drawings up to this same date and time have also been included with this Addendum 01.

Question: Traffic item #1 calls for 8490 LF. Plans show 16,980. LF & plans call for 4 inch & pay items says 6 inch ?

Answer: Traffic Bid Item 1 should have a quantity of 16,980 LF rather than 8490 LF. This has been corrected as part of the revisions described in the Clarifications earlier in this Addendum 01 that addressed changes to the bid documents' Proposal and Pay Notes sections.

Question: Traffic item #3 calls for 4510 LF plans show 9620 LF ?

Answer: Traffic Bid Item 3 should have a quantity of 4810 LF rather than 4510 LF, and the Bid Item's description should indicate that this is a pay item for double solid yellow lines rather than paying for each solid yellow line separately. This has been corrected as part of the revisions described in the Clarifications earlier in this Addendum 01 that addressed changes to the bid documents' Proposal and Pay Notes sections.

Question: Traffic item #4 say 2 LF is this a mistake & should be each ?

Answer: Traffic Bid Item 4 should have a quantity of 54 LF rather than 2 LF. This has been corrected as part of the revisions described in the Clarifications earlier in this Addendum 01 that addressed changes to the bid documents' Proposal and Pay Notes sections.

PROPOSAL

TO: Honorable Mayor and City Council
City of Midland
Midland, Texas

Gentlemen: The undersigned bidder, having examined the drawings, specifications and contract documents, the location of the proposed work, and being fully advised as to the extent and character of the work, proposes to furnish all material, equipment, and to perform all labor and work necessary for the completion of the construction of the work described by and in accordance with the attached drawings, specifications, and contract, for the following prices, to wit:

Project Name: Solomon Lane Paving Bond Project

Project Number: BPU19-05

Miscellaneous Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	7 MO	Mobilization, furnished, installed, complete and in place, for the sum of: _____ dollars and _____ cents per month. (Pay Note M1)	$_____	$_____
2)	7 MO	Erosion/Sediment Control, furnished, installed, complete and in place, for the sum of: _____ dollars and _____ cents per month. (Pay Note M2)	$_____	$_____
3)	7 MO	Traffic Control, furnished, installed, complete and in place, for the sum of: _____ dollars and _____ cents per month. (Pay Note M3)	$_____	$_____
4)	7 MO	Job Site Safety, furnished, installed, complete and in place, for the sum of: _____ dollars and _____ cents per month. (Pay Note M4)	$_____	$_____
5)	6970 SY	Seeding & Stabilization, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note M5)	$_____	$_____

Miscellaneous Items				
Item No.	Quantity	Description	Unit Price	Total Amount
6)	1 LS	Spray Watering, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per lump sum. (Pay Note M6)	$_____	$_____
Total Miscellaneous Items 1-6		$_____		

Demolition Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	23180 SY	Unclassified Roadway Excavation (Depth ≤ 12”), complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D1)	$_____	$_____
2)	500 CY	Unclassified Ditch Excavation, complete and in place, for the sum of: _____dollars and _____cents per cubic yard. (Pay Note D2)	$_____	$_____
3)	14900 SY	Removal & Dispose of Existing Unclassified Pavement, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D3)	$_____	$_____
4)	240 SY	Removal & Disposal of Existing Unclassified Concrete Pavement, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D4)	$_____	$_____
5)	3020 SY	Removal & Disposal of Existing Unclassified Driveway Approaches, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D5)	$_____	$_____
6)	1320 LF	Removal & Disposal of Existing Concrete Curb & Gutter, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note D6)	$_____	$_____
7)	20 SY	Removal & Disposal of Existing Concrete Sidewalk & Ramps, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D7)	$_____	$_____

Demolition Items				
Item No.	Quantity	Description	Unit Price	Total Amount
8)	45 LF	Removal & Disposal of Existing Guard Rail, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note D8)	$_____	$_____
Total Demolition Items 1-8		$_____		

Storm Drain Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	120 LF	4.0' x 2.0' Reinforced Concrete Box Culvert furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note SD1)	$_____	$_____
2)	6 EA	Box Culvert Reinforced Concrete Headwall, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note SD2)	$_____	$_____
3)	2 EA	Pipe Culvert Reinforced Concrete Headwall, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note SD2)	$_____	$_____
4)	6 EA	Box Culvert Headwall Safety End Treatment, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note SD3)	$_____	$_____
5)	2 EA	Pipe Culvert Headwall Safety End Treatment, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note SD3)	$_____	$_____
6)	42 LF	12" Reinforced Concrete Pipe furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note SD4)	$_____	$_____
7)	102 LF	12" Reinforced Concrete Trench Drain, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note SD5)	$_____	$_____
Total Storm Drain Items 1-7		$_____		

Structural Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	45 LF	Guard Rail, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note S1)	$_____	$_____
2)	7 EA	Relocate Mailbox Foundation, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note S2)	$_____	$_____
Total Structural Items 1-2		$_____		

Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	23180 SY	Subgrade Preparation (Depth ≤ 8”), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P1)	$_____	$_____
2)	2060 CY	Unclassified Embankment (Density Controlled), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per cubic yard. (Pay Note P2)	$_____	$_____
3)	1710 SY	7” Jointed Concrete Pavement, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P3)	$_____	$_____
4)	1880 TON	2” Type D HMAC Asphalt Pavement Surface Course (PG70-22, 110 LBS / SY @ 1” Thick), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per ton. (Pay Note P4)	$_____	$_____
5)	1880 TON	2” Type C HMAC Asphalt Pavement Surface Course (PG64-22, 110 LBS / SY @ 1” Thick), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per ton. (Pay Note P5)	$_____	$_____
6)	3 EA	Concrete-Asphalt Pavement Transition Sleeper Slab, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note P6)		
7)	21470 SY	8” Flexible Base (Type A, Grade 4), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P7)	$_____	$_____

Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
8)	1710 SY	6" Flexible Base (Type A, Grade 4), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P7)	$_____	$_____
9)	3420 GAL	Bituminous Prime Coat (MC-30, 0.20 Gal / SY), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per gallon. (Pay Note P8)	$_____	$_____
10)	1710 GAL	Tack Coat (MC-30, 0.10 Gal / SY), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per gallon. (Pay Note P9)	$_____	$_____
11)	420 SY	6" Concrete Fillet, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P10)	$_____	$_____
12)	540 SY	6" Concrete Valley Gutter, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P11)	$_____	$_____
13)	2330 SY	6" Concrete Driveway Approach, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P12)	$_____	$_____
14)	20 SY	4" Concrete Sidewalk, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P13)	$_____	$_____

Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
15)	36 LF	Type A Concrete Curb & Gutter, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note P14)	$_____	$_____
16)	10230 LF	Concrete Ribbon Curb & Gutter, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note P14)	$_____	$_____
17)	1 EA	Manhole Ring & Cover Adjustment, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note P15)	$_____	$_____
18)	23 EA	Water Valve Box Ring & Cover Adjustment, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note P15)	$_____	$_____
Total Paving Items 1-18		$_____		

Traffic Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	16,980 LF	Retroreflectorized Pavement Markings (White, 4") (TxDOT Item 666, Type I) (Solid), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note T1)	$_____	$_____
2)	525 LF	Retroreflectorized Pavement Markings (White, 4") (TxDOT Item 666, Type I) (Dot), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note T1)	$_____	$_____
3)	4810 LF	Retroreflectorized Pavement Markings (Yellow, 4") (TxDOT Item 666, Type I) (Solid/Solid), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note T1)	$_____	$_____
4)	54 LF	Prefabricated Pavement Markings (White, 24") (TxDOT Item 668) (Solid), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note T2)	$_____	$_____
5)	14 EA	Prefabricated Pavement Markings (White, Bike Lane Symbol) (TxDOT Item 668), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note T3)	$_____	$_____
6)	11 EA	Rubber Median, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note T4)	$_____	$_____
Total Traffic Items 1-6		$_____		

Price For:	
1. Miscellaneous Items	$_____
2. Demolition Items	$_____
3. Storm Drain Items	$_____
4. Structural Items	$_____
5. Paving Items	$_____
6. Traffic Items	$_____
Total Price	$_____

In addition to providing the individual prices for the items above, Contract shall write the total bid amount in the sum of

_____dollars

and _____ cents total.

The undersigned bidder hereby declares that he has visited the site of the work and has carefully examined the contract documents pertaining to the work covered by the above bid. The selected contractor will receive written notice to proceed.

Bidder agrees to substantially complete all work within _210_ calendar days after receipt of notice to proceed.

PUBLIC INFORMATION

To the extent that Bidder is submitting a bid for a contract described by Section 552.371 of the Texas Government Code, Bidder agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this bid, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

Enclosed herewith in this proposal is a cashier's check, cash or bid bond on a form approved by the City Attorney, for

_____dollars

and _____ cents total. ($_____)

which it is agreed shall be collected and retained by the owner as liquidated damages in the event this proposal is accepted by the Owner within thirty days (30) after the date advertised for the reception of bids and the undersigned fails to execute the contract and required bonds with the owner, under the

conditions thereof, within (15) days after the date said proposal is accepted; otherwise said check or bond shall be returned to the undersigned on demand.

Name of Contractor		
Submitted By	Print Name and Title	
Mailing Address		
City	State	Zip

PAY NOTES

BPU19-05 Solomon Lane Paving Bond Project

Bid Item		Pay Quantity Note
Miscellaneous Items		
1	Mobilization	M1
2	Erosion/Sediment Control	M2
3	Traffic Control	M3
4	Job Site Safety	M4
5	Seeding & Stabilization	M5
6	Spray Watering	M6
Demolition Items		
1	Unclassified Roadway Excavation (Depth ≤ 12")	D1
2	Unclassified Ditch Excavation	D2
3	Removal & Disposal of Existing Unclassified Pavement	D3
4	Removal & Disposal of Existing Unclassified Concrete Pavement	D4
5	Removal & Disposal of Existing Unclassified Driveway Approach	D5
6	Removal & Disposal of Existing Concrete Curb & Gutter	D6
7	Removal & Disposal of Existing Concrete Sidewalk & Ramps	D7
8	Removal & Disposal of Existing Guard Rail	D8
Storm Drain Items		
1	4.0' x 2.0' Reinforced Concrete Box Culvert	SD1
2	Box Culvert Reinforced Concrete Headwall	SD2
3	Pipe Culvert Reinforced Concrete Headwall	SD2
4	Box Culvert Headwall Safety End Treatment	SD3
5	Pipe Culvert Headwall Safety End Treatment	SD3
6	12" Reinforced Concrete Pipe Driveway Culvert Crossing	SD4
7	Reinforced Concrete Trench Drain Driveway Culvert Crossing	SD5
Structural Items		
1	Guard Rail	S1
2	Relocate Mailbox Foundation	S2

Paving Items

1	Subgrade Preparation (Depth ≤ 8")	P1
2	Unclassified Embankment (Density Controlled)	P2
3	7" Jointed Concrete Pavement	P3
4	2" Type D HMAC Asphalt Pavement Surface Course (PG70-22, 110 LBS / SY @ 1" Thick)	P4
5	2" Type C HMAC Asphalt Pavement Surface Course (PG64-22, 110 LBS / SY @ 1" Thick)	P5
6	Concrete-Asphalt Pavement Transition Sleeper Slab	P6
7	8" Flexible Base (Type A, Grade 4)	P7
8	6" Flexible Base (Type A, Grade 4)	P7
9	Bituminous Prime Coat (MC-30, 0.20 Gal / SY)	P8
10	Tack Coat (MC-30, 0.10 Gal / SY)	P9
11	6" Concrete Fillet	P10
12	6" Concrete Valley Gutter	P11
13	6" Concrete Driveway Approach	P12
14	4" Concrete Sidewalk	P13
15	Type A Concrete Curb & Gutter	P14
16	Concrete Ribbon Curb & Gutter	P14
17	Manhole Ring & Cover Adjustment	P15
18	Water Valve Box Ring & Cover Adjustment	P15

Traffic Items

1	Retroreflectorized Pavement Markings (White, 4")(Solid)	T1
2	Retroreflectorized Pavement Markings (White, 4")(Dot)	T1
3	Retroreflectorized Pavement Markings (Yellow, 4")(Solid/Solid)	T1
4	Prefabricated Pavement Markings (White, 24")(Solid)	T2
5	Prefabricated Pavement Markings (White, Bike Lane Symbol)	T3
6	Rubber Median	T4

PAY QUANTITY NOTES

M1 Includes the necessary equipment, labor, materials, and incidentals for all Mobilization to the job site complete and in place. Measurement and payment to be made per month.

M2 Includes the necessary equipment, labor, materials, and incidentals to implement the Erosion Control Plan per the construction drawings and City of Midland standards and specifications. Measurement and payment to be made per month.

M3 Includes the necessary equipment, labor, materials, and incidentals to implement the Traffic Control per the approved Traffic Control Plan. Any required traffic control devices are to meet the City of Midland Traffic Division Standards. Measurement and payment to be made per month.

M4 Includes the necessary equipment, labor, materials, and incidentals to implement Job Site Safety and to provide a safe work environment for the project work area (including all personal protection equipment, trench safety, etc.) per the construction drawings and in compliance with all applicable Federal, State, and Local requirements or regulations including those of OSHA and the City of Midland. JOB SITE SAFETY IS THE RESPONSABILITY OF THE CONTRACTOR. Measurement and payment to be made per month.

M5 Includes the necessary equipment, labor, materials, and incidentals for Seeding & Stabilization per the construction drawings and City of Midland standards and specifications, including all removal, storage, and replacement of existing topsoil as well as all seeding and appurtenances. Watering is addressed in a separate pay note. Measurement and payment to be made per square yard measured along the ground surface.

M6 Includes the necessary equipment, labor, materials, and incidentals for Spray Watering per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per lump sum.

D1 Includes the necessary equipment, labor, materials, and incidentals for Unclassified Excavation per the construction drawings and City of Midland standards and specifications including all existing pavement and sub-structure removal, unclassified excavation, material removal, and appurtenances. Measurment and payment to be per square yard measured along the ground surface.

D2 Includes the necessary equipment, labor, materials, and incidentals for Unclassified Excavation per the construction drawings and City of Midland standards and specifications including all existing pavement and sub-structure removal, unclassified excavation, material removal, and appurtenances. Measurment and payment to be per cubic yard of material removed.

D3 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Pavement per the construction drawings and City of Midland standards and specifications including all pavement removal, saw-cutting, and appurtenances. Depths given are approximate and pavement material is to be removed in its entirety. No additional compensation will be made for increased pavement depth removal. Measurement and payment to be made per square yard measured along the ground surface.

D4 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Concrete Pavement per the construction drawings and City of Midland standards and specifications including all pavement removal, saw-cutting, and appurtenances. Depths given are approximate and pavement material is to be removed in its entirety. No additional compensation will be made for increased pavement depth removal. Measurement and payment to be made per square yard measured along the ground surface.

D5 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Driveway Approach per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

D6 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Concrete Curb & Gutter per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot measured along the back of curb.

D7 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Concrete Sidewalk & Ramps per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

D8 Includes the necessary equipment, labor, materials, and incidentals to Remove & Dispose of Existing Guard Rail per the construction drawings and City of Midland standards and specifications, including removal of all, columns, posts, foundations, anchors, gates, frames, and structures as well as all excavation, backfill, cutting, and appurtenances. Measurement and payment to be made per linear foot measures along the ground surface following the guard rail centerline through all structures and appurtenances.

SD1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Reinforced Concrete Box Culvert per the construction drawings and City of Midland standards and specifications, including all embedment, detector wire, tracer tape, necessary testing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the box culvert centerline through all structures and appurtenances.

SD2 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Reinforced Concrete Headwall per the construction drawings and City of Midland standards and specifications, including all formes, reinforcment, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per each concrete headwall installed.

SD3 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Headwall Safety End Treatment per the construction drawings and City of Midland standards and specifications, including all formes, reinforcment, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per each concrete headwall installed.

SD4 Includes the necessary equipment, labor, materials, and incidentals for the installation of Reinforced Concrete Pipe Driveway Culvert Crossing per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, base, forms, pipe, reinforcement, structures, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all structures and appurtenances.

SD5 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Reinforced Concrete Trench Drain Driveway Culvert Crossing per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, base, forms, pipe, reinforcement, structures, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the trench drain centerline through all structures and appurtenances.

S1 Includes the necessary equipment, labor, materials, and incidentals to install a Guard Rail per the construction drawings and City of Midland standards and specifications, including all columns, posts, foundations, anchors, and structures as well as all excavation, backfill, cutting, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the guard rail centerline through all structures and appurtenances.

S2 Includes the necessary equipment, labor, materials, and incidentals to Relocate Mailbox Foundation per the construction drawings and City of Midland standards and specifications, including all structure removal, foundation placement, and appurtenances. Measurement and payment to be made per each existing mailbox foundation removed and new mailbox foundation set.

P1 Includes the necessary equipment, labor, materials, and incidentals for Subgrade Preparation per the construction drawings and City of Midland standards and specifications, including all proof-rollling, sub-grade reworking, scarifying, compaction, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P2 Includes the necessary equipment, labor, materials, and incidentals for placement of Unclassified Embankment per the construction drawings and City of Midland standards and specifications, including all sprinkling, rolling, correction of soft spots, grading, sloping, compaction, and appurtenances. Measurement and payment to be made per each cubic yard placed.

P3 Includes the necessary equipment, labor, materials, and incidentals for placement of Jointed Concrete Pavement per the construction drawings and City of Midland standards and specifications, including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P4 Includes the necessary equipment, labor, materials, and incidentals for the placement of Type "D" HMAC Asphalt Pavement Surface Course (PG 70-22, 110 LBS / SY at 1" thick) per the construction drawings and City of Midland standards and specifications, including all placement, compaction, and appurtenances. Measurement and payment to be made per ton of material placed.

P5 Includes the necessary equipment, labor, materials, and incidentals for the placement of Type "C" HMAC Asphalt Pavement Surface Course (PG 64-22, 110 LBS / SY at 1" thick) per the construction drawings and City of Midland standards and specifications, including all placement, compaction, and appurtenances. Measurement and payment to be made per ton of material placed.

P6 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete-Asphalt Pavement Transition Sleeper Slab per the construction drawings and City of Midland standards and specifications, including all forming, reinforcement, placement, finishing, and appurtenances. Measurement and payment to be made per each.

P7 Includes the necessary equipment, labor, materials, and incidentals for placement of Flexible Base compacted to 95% Density, ASTM D1557, per the construction drawings and City of Midland standards and specifications including all placement, compaction, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P8 Includes the necessary equipment, labor, materials, and incidentals for application of Bituminous Prime Coat (MC-30, 0.20 GAL / SY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per gallon of material applied at the designated rate.

P9 Includes the necessary equipment, labor, materials, and incidentals for application of Tack Coat (MC-30, 0.10 GAL / SY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per gallon of material applied at the designated rate.

P10 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Fillet per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Curb section is formed and poured monolithically with fillet and is not a separate bid item. Measurement and payment to be made per square yard measured along the ground surface.

P11 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Valley Gutter per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P12 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Driveway Approach per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Pedestrian access ramps at the driveway approach are considered part of the approach and are not a separate bid item. Measurement and payment to be made per square yard measured along the ground surface.

P13 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Sidewalk per the construction drawings and City of Midland standards and specifications, including all forming, reinforcement, placement, jointing, finishing, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P14 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Curb & Gutter per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the back-of-curb.

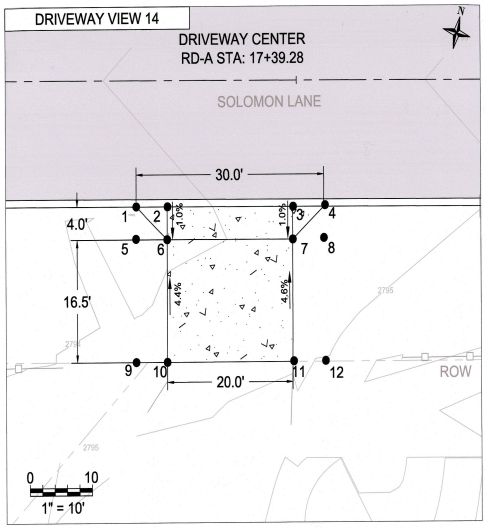
P15 Includes the necessary equipment, labor, materials, and incidentals for Ring & Cover Adjustment per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. This includes a minimum 1.0' wide concrete collar whose width is measured from the outer edge of the cover to the outer edge of the concrete ring. Measurement and payment to be made per each adjustment made.

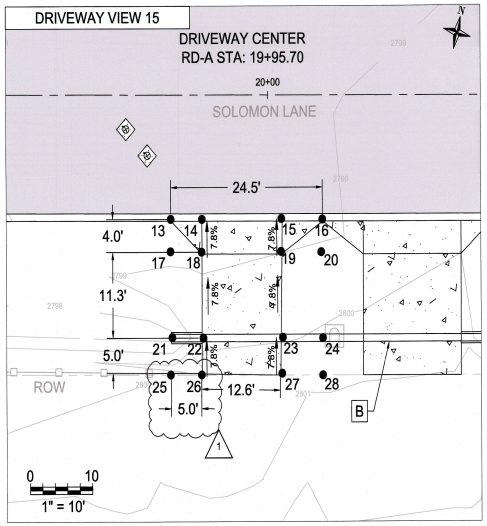
T1 Includes the necessary equipment, labor, materials, and incidentals for the placement of Retroreflectorized Pavement Markings per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot placed.

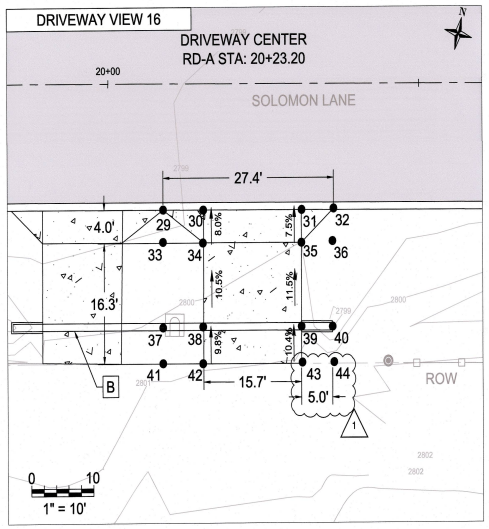
T2 Includes the necessary equipment, labor, materials, and incidentals for the placement of Prefabricated Pavement Markings per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot placed.

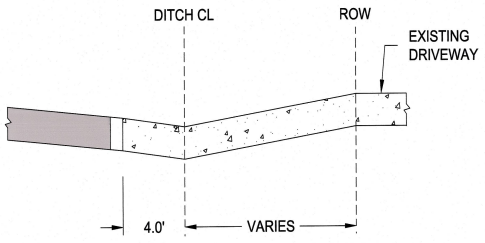
T3 Includes the necessary equipment, labor, materials, and incidentals for the placement of Prefabricated Pavement Markings per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per each marking placed.

T4 Includes the necessary equipment, labor, materials, and incidentals for the installation of Rubber Median per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per each median installed.









DRIVEWAY 14 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY KEYED NOTES:

B 41.6' - DRIVEWAY CULVERT CROSSING DETAIL D10, SHEET 61.

DRIVEWAY 14 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10713598.45	1751318.02	2793.76
2	FG	10713599.70	1751322.86	2793.86
3	FG	10713604.77	1751342.42	2794.25
4	FG	10713606.03	1751347.26	2794.35
5	FL	10713594.16	1751319.14	2793.73
6	FL	10713595.41	1751323.98	2793.82
7	FL	10713600.48	1751343.53	2794.21
8	FL	10713601.74	1751348.39	2794.32
9	EG	10713578.14	1751323.29	2794.17
10	EG	10713579.41	1751328.13	2794.55
11	EG	10713584.54	1751347.66	2794.96
12	EG	10713585.82	1751352.57	2795.17

DRIVEWAY 15 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	FG	10713663.77	1751569.92	2798.40
14	FG	10713665.03	1751574.76	2798.48
15	FG	10713668.27	1751587.25	2798.70
16	FG	10713669.90	1751593.56	2798.78
17	FG	10713659.48	1751571.03	2798.23
18	FG	10713660.74	1751575.87	2798.79
19	FG	10713663.94	1751588.23	2799.01
20	FG	10713665.61	1751594.67	2799.13
21	FL	10713648.53	1751573.88	2797.75
22	FG	10713649.79	1751578.71	2799.67
	FL	--------	--------	2797.90
23	FG	10713652.98	1751591.00	2799.88
	FL	--------	--------	2798.29
24	FL	10713654.67	1751597.51	2800.13
25	EG	10713643.69	1751575.13	2800.00
26	EG	10713645.11	1751579.93	2800.06
27	EG	10713648.12	1751592.19	2800.27
28	EG	10713649.83	1751598.77	2800.54

DRIVEWAY 16 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
29	FG	10713669.90	1751593.56	2798.78
30	FG	10713671.54	1751599.85	2798.86
31	FG	10713675.48	1751615.08	2799.75
32	FG	10713676.74	1751619.92	2799.83
33	FG	10713665.61	1751594.67	2799.13
34	FG	17013667.25	1751600.97	2799.18
35	FG	10713671.19	1751616.19	2799.45
36	FG	10713672.45	1751621.03	2799.62
37	FL	10713654.67	1751597.51	2800.13
38	FG	10713656.30	1751603.81	2800.37
	FL	--------	--------	2798.39
39	FG	10713660.25	1751619.03	2800.75
	FL	--------	--------	2798.87
40	FL	10713661.51	1751623.87	2799.03
41	EG	10713649.83	1751598.77	2800.54
42	EG	10713651.46	1751605.06	2800.86
43	EG	10713655.41	1751620.28	2801.07
44	EG	10713656.67	1751625.12	2801.07

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description
01	6/17/22	PAK	ADD DIMENSIONS

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-06
DATE: MAY 2022

MIDLAND Engineering Services

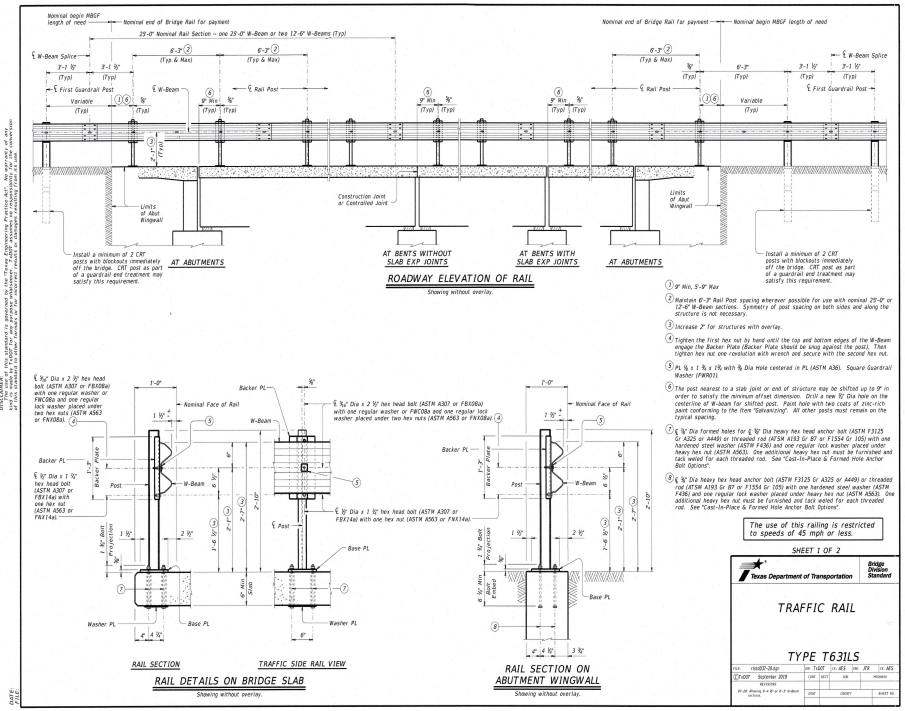
SOLOMON LANE PAVING
BOND PROJECT
DRIVEWAY PLAN
5 OF 16

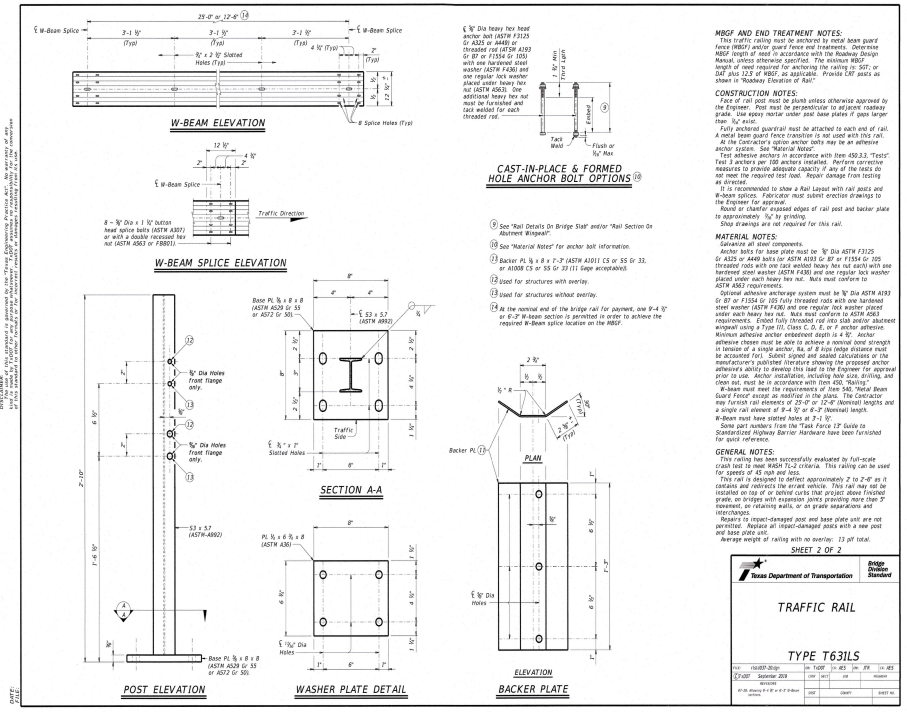
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

37
OF 64

File: P:\Engineering Services\Engineering Projects\2019\BPU19-06 Solomon Pvng & Util\03 DWG\S3.1 DWG\Plans PVNG\C12 DRWY - Copy.dwg Jun 16, 2022 - 3:38pm jshingston

PACKET





MBGF AND END TREATMENT NOTES:

This traffic railing must be anchored by metal beam guard fence (MBGF) and/or guard fence end treatments. Determine MBGF length of need in accordance with the Roadway Design Manual, unless otherwise specified. The minimum MBGF length of need required for anchoring the railing is: SGT; or DAT plus 12.5' of MBGF, as applicable. Provide CAT posts as shown in "Roadway Elevation of Rail".

CONSTRUCTION NOTES:

Face of rail post must be plumb unless otherwise approved by the Engineer. Post must be perpendicular to adjacent roadway grade. Use epoxy mortar under post base plates if gaps larger than 1/8" exist.

Fully anchored guardrail must be attached to each end of rail. A metal beam guard fence transition is not used with this rail. Use the contractor's option anchor bolts may be an adhesive anchor system or a cast-in-place.

Test adhesive anchors in accordance with Item 450.3.3, "Tests". Test 3 anchors per 100 anchors installed. Perform corrective measures to provide adequate capacity if any of the tests do not meet the required test load. Repair damage from testing as directed.

It is recommended to show a Rail Layout with rail posts and W-beam splices. Fabricator must submit erection drawings to the Engineer for approval.

Round or chamfer exposed edges of rail post and backer plate to approximately 1/16" by grinding.

Shop drawings are not required for this rail.

MATERIAL NOTES:

Galvanize all steel components.

Anchor bolts for base plate must be 3/4" Dia ASTM F3125 Gr A325 or A449 bolts (or ASTM A193 Gr B7 or F1554 Gr 105 threaded rods with one cast welded heavy hex nut each) with one hardened steel washer (ASTM F436) and one regular lock washer placed under each heavy hex nut. Nuts must conform to ASTM A563 requirements.

Optional adhesive anchorage system must be 3/4" Dia ASTM A193 Gr B7 or F1554 Gr 105 fully threaded rods with one hardened steel washer (ASTM F436) and one regular lock washer placed under each heavy hex nut. Nuts must conform to ASTM A563 requirements. Embed fully threaded rod into slab and/or abutment wingwall using a Type III, Class C, D, E, or F anchor adhesive. Minimum adhesive anchor embedment depth is 4 1/2". Anchor adhesive chosen must be able to achieve a nominal bond strength in tension of a single anchor, Na, of 8 kips (edge distance must be accounted for). Submit signed and sealed calculations or the manufacturer's published literature showing the proposed anchor adhesive's ability to develop this load to the Engineer for approval prior to use. Anchor installation, including hole size, drilling, and clean out, must be in accordance with Item 450, "Railing".

W-beam must meet the requirements of Item 540, "Metal Beam Guard Fence" except as modified in the plans. The Contractor may furnish rail elements of 25'-0" or 12'-6" (Nominal) lengths and a single rail element of 9'-4 1/2" or 8'-3" (Nominal) length.

W-Beam must have slotted holes at 3'-1 1/2".

Some part numbers from the "Task Force 13" Guide to Standardized Highway Barrier Hardware have been furnished for quick reference.

GENERAL NOTES:

This railing has been successfully evaluated by full-scale crash test to meet MASH TL-2 criteria. This railing can be used for speeds of 45 mph and less.

This rail is designed to deflect approximately 2 to 2'-6" as it contains and redirects the errant vehicle. This rail may not be installed on top of or behind curbs that project above finished grade, on bridges with expansion joints traveling more than 3" movement, or retaining walls, or on grade separations and bridge rails.

Rosaries to impact-damaged post and base plate unit are not permitted. Replace all impact-damaged posts with a new post and base plate unit.

Average weight of railing with no overlay: 13 plf total.

The use of this railing is restricted to speeds of 45 mph or less.

SHEET 1 OF 2

Texas Department of Transportation — Bridge Division Standard

TRAFFIC RAIL

TYPE T631LS

FILE: t631ls-18.dgn	DN: TxDOT	CK: JES	DW:	CK: JES
©TxDOT September 2018	CONT	SECT	JOB	HIGHWAY
REVISIONS				
05-18: Moving 9'-4 1/2" or 8'-3" W-Beam sections	DIST	COUNTY		SHEET NO.

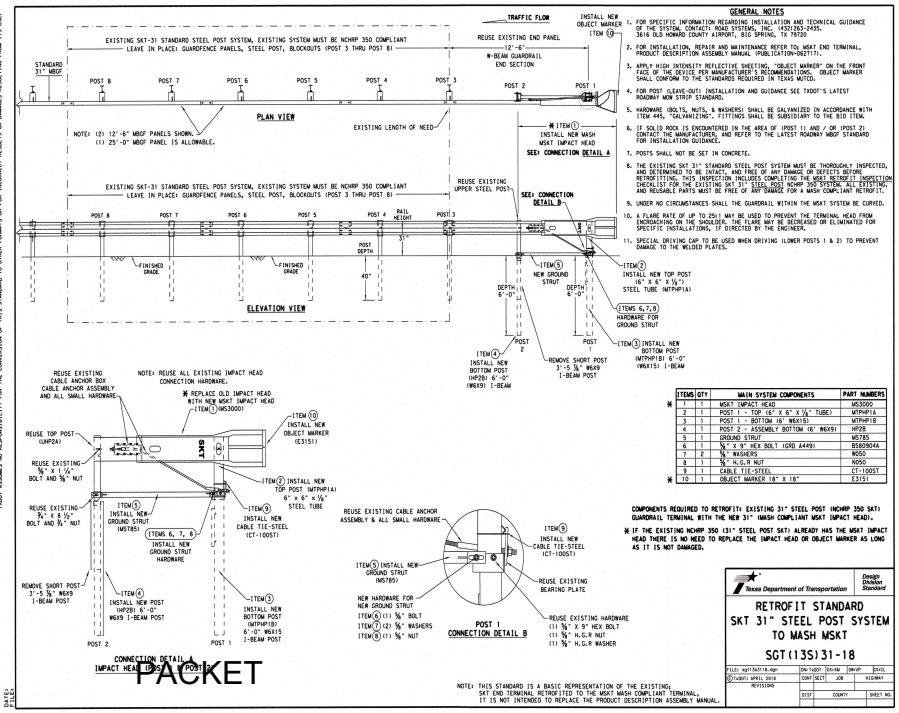
SHEET 2 OF 2

Texas Department of Transportation — Bridge Division Standard

TRAFFIC RAIL

TYPE T631LS

FILE: t631ls-18.dgn	DN: TxDOT	CK: JES	DW:	CK: JES
©TxDOT September 2018	CONT	SECT	JOB	HIGHWAY
REVISIONS				
05-18: Moving 9'-4 1/2" or 8'-3" W-Beam sections	DIST	COUNTY		SHEET NO.



GENERAL NOTES

1. FOR SPECIFIC INFORMATION REGARDING INSTALLATION AND TECHNICAL GUIDANCE OF THE SYSTEM, CONTACT: ROAD SYSTEMS, INC. (4521263-2435. 3616 OLD HOWARD COUNTY AIRPORT, BIG SPRING, TX 79720
2. FOR INSTALLATION, REPAIR AND MAINTENANCE REFER TO: MSKT END TERMINAL, PRODUCT DESCRIPTION ASSEMBLY MANUAL (PUBLICATION-062777).
3. APPLY HIGH INTENSITY REFLECTIVE SHEETING, "OBJECT MARKER" ON THE FRONT FACE OF THE DEVICE PER MANUFACTURER'S RECOMMENDATIONS. OBJECT MARKER SHALL CONFORM TO THE STANDARDS REQUIRED IN TEXAS MUTCD.
4. FOR POST (LEAVE-OUT) INSTALLATION AND GUIDANCE SEE TXDOT'S LATEST ROADWAY MOW STRIP STANDARD.
5. HARDWARE (BOLTS, NUTS, & WASHERS) SHALL BE GALVANIZED IN ACCORDANCE WITH ITEM 445, "GALVANIZING". FITTINGS SHALL BE SUBSIDIARY TO THE BID ITEM.
6. IF SOLID ROCK IS ENCOUNTERED IN THE AREA OF (POST 1) AND / OR (POST 2) CONTACT THE MANUFACTURER, AND REFER TO THE LATEST ROADWAY MBGF STANDARD FOR INSTALLATION GUIDANCE.
7. POSTS SHALL NOT BE SET IN CONCRETE.
8. THE EXISTING SKT 31" STANDARD STEEL POST SYSTEM MUST BE THOROUGHLY INSPECTED, AND DETERMINED TO BE INTACT, AND FREE OF ANY DAMAGE OR DEFECTS BEFORE RETROFITTING. THIS INSPECTION INCLUDES COMPLETING THE MSKT RETROFIT INSPECTION CHECKLIST FOR THE EXISTING SKT 31" STEEL POST NCHRP 350 SYSTEM. ALL EXISTING, AND REUSABLE PARTS MUST BE FREE OF ANY DAMAGE FOR A MASH COMPLIANT RETROFIT.
9. UNDER NO CIRCUMSTANCES SHALL THE GUARDRAIL WITHIN THE MSKT SYSTEM BE CURVED.
10. A FLARE RATE OF UP TO 25:1 MAY BE USED TO PREVENT THE TERMINAL HEAD FROM ENCROACHING ON THE SHOULDER. THE FLARE MAY BE DECREASED OR ELIMINATED FOR SPECIFIC INSTALLATIONS, IF DIRECTED BY THE ENGINEER.
11. SPECIAL DRIVING CAP TO BE USED WHEN DRIVING (LOWER POSTS 1 & 2) TO PREVENT DAMAGE TO THE WELDED PLATES.

ITEMS	QTY	MAIN SYSTEM COMPONENTS	PART NUMBERS
*	1	1	MSKT IMPACT HEAD	MS3000
	2	1	POST 1 – TOP (6" X 6" X 1/4" TUBE)	WTHP1A
	3	1	POST 1 – BOTTOM (6' W6X15)	WTHP1B
	4	1	POST 2 – ASSEMBLY BOTTOM (6' W6X9)	HP2B
	5	1	GROUND STRUT	WS78S
	6	5	3/4" X 9" HEX BOLT (GRD A449)	B580904A
	7	2	3/4" WASHERS	M350
	8	1	3/4" H.G.R NUT	N050
	9	1	CABLE TIE-STEEL	CT-1005T
*	10	1	OBJECT MARKER 18" X 18"	E3151

COMPONENTS REQUIRED TO RETROFIT< EXISTING 31" STEEL POST (NCHRP 350 SKT> GUARDRAIL TERMINAL WITH THE NEW 31" (MASH COMPLIANT MSKT IMPACT HEAD).

* IF THE EXISTING NCHRP 350 (31" STEEL POST SKT> ALREADY HAS THE MSKT IMPACT HEAD THERE IS NO NEED TO REPLACE THE IMPACT HEAD OR OBJECT MARKER AS LONG AS IT IS NOT DAMAGED.

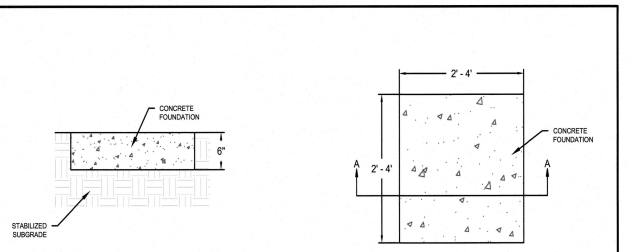
Texas Department of Transportation — Design Division Standard

RETROFIT STANDARD SKT 31" STEEL POST SYSTEM TO MASH MSKT

SGT(13S)31-18

FILE: sgt13s31r18.dgn	DN: TxDOT	CK: KW	DW: KP	CK: KL
©TxDOT APRIL 2018	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

NOTE: THIS STANDARD IS A BASIC REPRESENTATION OF THE EXISTING, SKT END TERMINAL RETROFITED TO THE MSKT MASH COMPLIANT TERMINAL, IT IS NOT INTENDED TO REPLACE THE PRODUCT DESCRIPTION ASSEMBLY MANUAL.



NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. CONCRETE FOUNDATION THICKNESS TO BE A MINIMUM OF 6".
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: PAK	EFFECTIVE DATE: BPU19–05 SOLOMON LANE PAVING	SCALE: NTS	DETAIL:
CHECKED: JCF	MAILBOX CONCRETE FOUNDATION		D12
APPROVED: JEO			

Know what's below. Call before you dig.

DRAWN/DESIGNED:	PAK						
CHECKED:	JCF						
APPROVED:	JCF						
VERT. SCALE:							
HORIZ. SCALE:		BPU19-05	01	6/17/22	PAK	ADD MAILBOX DETAIL	
PROJECT NO.:		Rev. No.	Date	By	Description		
DATE:		MAY 2022					

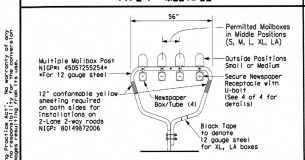
SOLOMON LANE PAVING
BOND PROJECT
DETAILS
8 OF 8

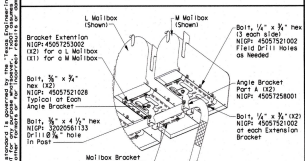
STATE OF TEXAS — JOSHUA C. FERGUSON — 117692 — LICENSED PROFESSIONAL ENGINEER — 6/17/2022

64
OF 64

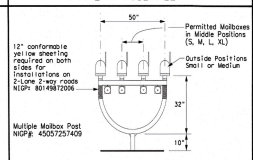
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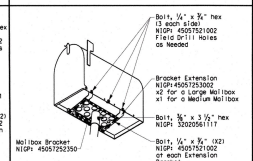
TYPE 1 - MULTIPLE





TYPE 4 - MULTIPLE





MAILBOX SIZES

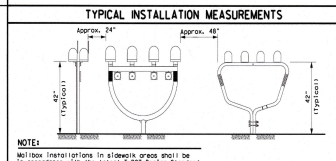
MAILBOX SIZE	TYPICAL DIMENSIONS LENGTH	WIDTH	HEIGHT	MAX ** WEIGHT
SMALL	19 1/2"	6"	7"	6 LBS
MEDIUM	22 1/2" *	8" *	11 1/2" *	8 LBS
LARGE	23 1/2"	11 1/2"	13 1/2"	11 LBS
EXTRA LARGE	18"	14"	12"	13 LBS
LOCKABLE	18"	11 1/2"	15"	23 LBS

* See Note 1.
** Excluding Molded Plastic on 4 X 4 Post

GENERAL NOTES:

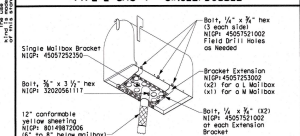
1. Dimensions shown (length, width, and height) are typical, not maximums. However, anytime a medium size mailbox is mounted on a single/double mount or on the outside position on a multi mount, the dimensions shown are maximums.
2. Mailboxes shall be made of light weight sheet metal or light weight plastic. Heavy steel, cast iron or decorative mailboxes shall not be used on the state highway system.

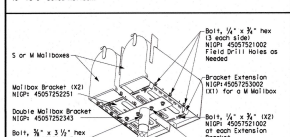
TYPICAL INSTALLATION MEASUREMENTS



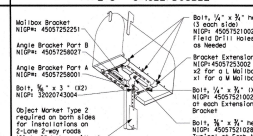
NOTE:
Mailbox installations in sidewalk areas shall be in accordance with the latest TxDOT Design Standard sheets PED-Pedestrian Facilities Curb Ramps.

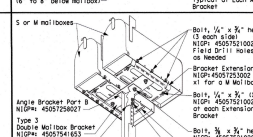
TYPE 2 and 4 - SINGLE/DOUBLE



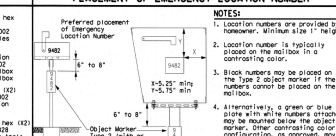


TYPE 3 - SINGLE/DOUBLE





PLACEMENT OF EMERGENCY LOCATION NUMBER

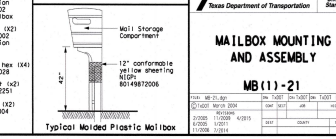


NOTES:

1. Location numbers are provided by homeowner. Minimum size 1" height.
2. Location number is typically placed on the mailbox in a contrasting color.
3. Black numbers may be placed on the Type 2 object marker if the numbers cannot be placed on the mailbox.
4. Alternatively, a green or blue plate with white numbers attached may be mounted below the object marker. Other contrasting color configuration, as approved, may be used.
5. See 3 of 4 for Foundation details.
6. See 4 of 4 for Hardware details.

SHEET 1 OF 4

TYPE 5



Typical Molded Plastic Mailbox

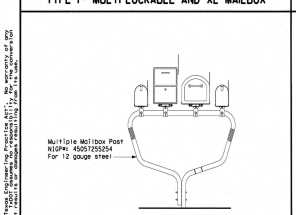
Texas Department of Transportation — Maintenance Division Standard

MAILBOX MOUNTING AND ASSEMBLY

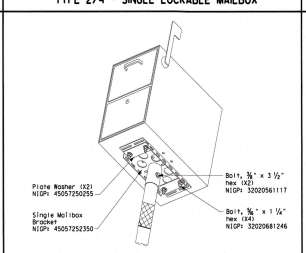
MB(1)-21

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©TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS				
2/2005 11/2009 4/2015				
8/2005 1/2013	DIST	COUNTY		SHEET NO.
11/2006 1/2014				

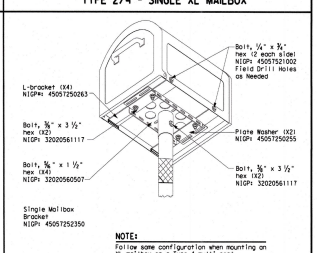
TYPE 1 - MULTI LOCKABLE AND XL MAILBOX



TYPE 2/4 - SINGLE LOCKABLE MAILBOX

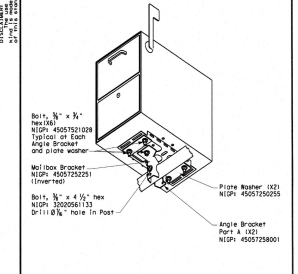


TYPE 2/4 - SINGLE XL MAILBOX

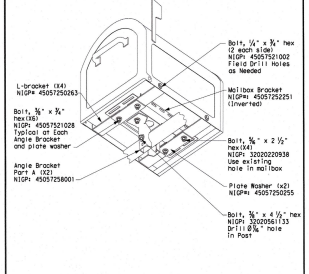


NOTE:
Follow same configuration when mounting an XL mailbox on a Type 4 multi post.

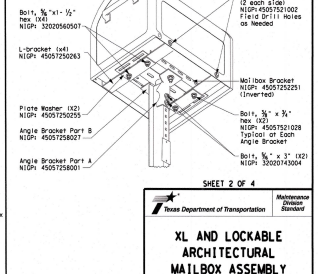
TYPE 1 MULTI - LOCKABLE ARCHITECTURAL (LA)



TYPE 1 MULTI - XL MAILBOX



TYPE 3 - XL MAILBOX MOUNTING



SHEET 2 OF 4

Texas Department of Transportation — Maintenance Division Standard

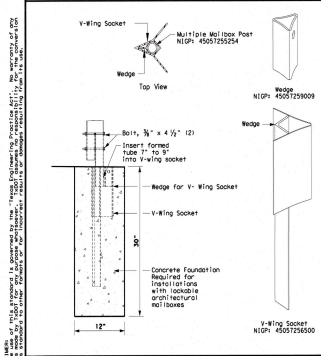
XL AND LOCKABLE ARCHITECTURAL MAILBOX ASSEMBLY

MB(2)-21

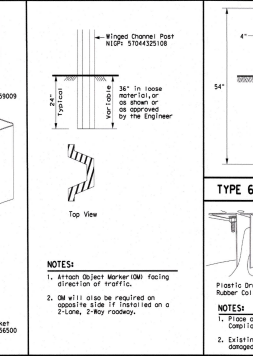
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©TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
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2/2005 11/2009 4/2015				
8/2005 1/2013	DIST	COUNTY		SHEET NO.
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TYPE 1 - SUPPORT/FOUNDATION

Thin Wall Tube w/ V-LOC Anchorage



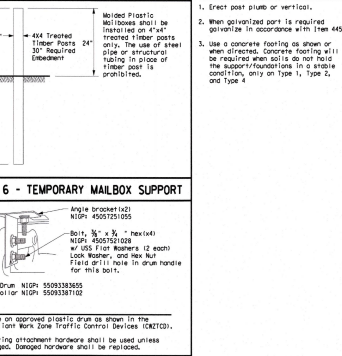
TYPE 3 - SUPPORT/FOUNDATION



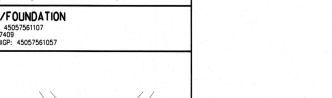
NOTES:

1. Attach Object Marker(OM) facing direction of traffic.
2. OM will also be required on opposite side if installed on a 2-Lane, 2-Way roadway.

TYPE 5 - SUPPORT/FOUNDATION



TYPE 6 - TEMPORARY MAILBOX SUPPORT



NOTES:

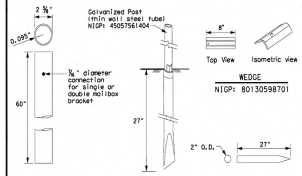
1. Place an approved plastic drum as shown in the Compliant Work Zone Traffic Control Devices (CWZTCD).
2. Existing attachment hardware shall be used unless damaged. Damaged hardware shall be replaced.

GENERAL NOTES:

1. Erect post plumb or vertical.
2. When galvanized part is required galvanize in accordance with Item 445.
3. Use a concrete footing as shown or when directed. Concrete footing will be required when soils do not hold the support/foundations in a stable condition, only on Type 1, Type 2, and Type 4

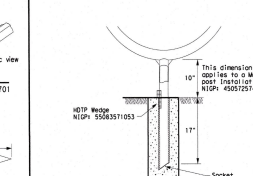
TYPE 2 - SUPPORT/FOUNDATION

Thin Wall Steel Tube w/Wedge Anchor System



TYPE 4 - SUPPORT/FOUNDATION

Whitecoated steel post NIGP: 45057561107
Multiple post NIGP: 45057257409
Recycled Rubber post (RR) NIGP: 45057561057



SHEET 3 OF 4

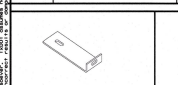
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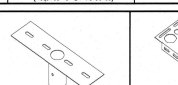
MAILBOX SUPPORT AND FOUNDATION

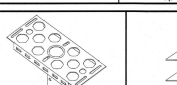
MB(3)-21

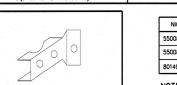
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TYPE	TYPE 1	TYPE 2	TYPE 3	TYPE 4			TYPE 5	TYPE 6
Configuration	Multiple	Single or Double	Single or Double	Single	Double	Multiple	Single	Single
Mailbox Size NIGP #	Outside Positions S or M Inside Positions S, M, L, XL, or LA	Single: S, M, L, XL, or LA Double: SS, SM, MM	Single: S, M, L, or XL Double: SS, SM, MM	S, M, L, XL, or LA	SS, SM, or MM	Outside Position: S or M Inside Position: S, M, L, or XL	Molded Plastic	S, or M
Mailbox Post NIGP #	45057255254 (Galvanized Multiple)	45057561404 (Thin Walled Galvanize)	57044325108 (Wing Channel Post)	45057561107 (Thin walled white powder coated) 45057561057 (Recycled Rubber Post: S or M only)	45057561107 (Thin Walled White Powder Coated)	45057257409 (White Powder Coated Multiple)	4x4 Timber	Construction Barrel
Post and Mailbox Hardware NIGP #	45057259009 (Wedge) 45057256500 (V-Wing Socket) 45057253002 (Bracket Extension) 45057252251 (Mailbox Bracket) 45057258001 (Part A Angle Bracket x2) 45057258027 (Part B Angle Bracket x2) 45057252255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket for XL x4)	80130598701 (Wedge) 80130238407 (Wedge Anchor) 45057253002 (Bracket Extension) 45057252343 (Double MB Bracket) 45057252350 (S. Mailbox Bracket) 45057255251 (Mailbox Bracket) 45057252255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket for4, x4)	45057541653 (Type 3 Double Mailbox Bracket) 45057252251 (Mailbox Bracket) 45057253002 (Bracket Extension) 45057258001 (Part A Angle Bracket) 45057258027 (Part B Angle Bracket) 45057252255 (Plate Washer for XL x2) 45057250263 (L-Bracket for XL x4)	55083571053 (Wedge) 55083571004 (Socket) 45057252350 (Single Mailbox Bracket) 45057253002 (Bracket Extension) 45057252343 (Double Mount Bracket) 45057252251 (Mailbox Bracket x2)	55083571053 (Wedge) 55083571004 (Socket) 45057253002 (Bracket Extension) 45057252343 (Double Mount Bracket) 45057252251 (Mailbox Bracket x2)	55083571053 (Wedge) 55083571004 (Socket) 45057253002 (Bracket Extension) 45057252350 (Single Mount Bracket) 45057252255 (Plate Washer for XL x2) 45057250263 (L-Bracket for XL x4)	None	45057251055 Angle Bracket (x2)
Foundation Used	Class B Concrete (Required for LA Mailboxes)	Class B Concrete (Required for LA Mailboxes)	None	Class B Concrete (not used with recycled rubber post, required for LA Mailboxes)	Class B Concrete (not required)	Class B Concrete	None	None

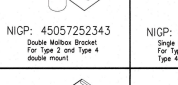

NIGP: 45057250263
L-Bracket x4 for XL sized mailboxes


NIGP: 45057252343
Double Mailbox Bracket For Type 2 and Type 4 double mount

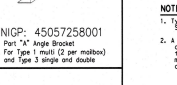

NIGP: 45057252350
Single Mailbox Bracket For Type 2 single and for Type 4 single and multi mount

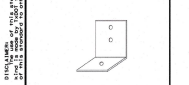

NIGP: 45057258001
Part "A" Angle Bracket For Type 1 multi (2 per mailbox) and Type 3 single and double

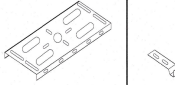

NIGP: 45057251055
Type 6 Angle Bracket (2 per mailbox)

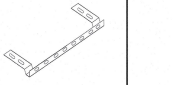

NIGP: 45057252251
Mailbox Bracket For Type 1 multi and any double mount (use 2)

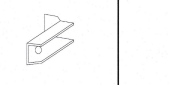

NIGP: 45057253002
Bracket Extension Use 1 for a medium Mailbox Use 2 for a Large Mailbox

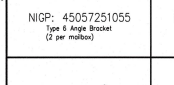

NIGP: 45057258027
Part "B" Angle Bracket For Type 3 single and double

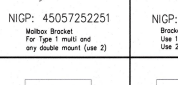

NIGP: 80130598701
Wedge for Type 2

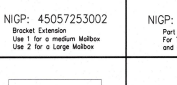

NIGP: 45057250255
Plate Washer for Architecural and XL Mailboxes


NIGP: 45057541653
Type 3 double mailbox bracket


NIGP: 55083571053
Type 4 Mailbox Wedge


NIGP: 55083571004
Type 4 Mailbox Socket


NIGP: 80130238407
Type 2 Wedge Anchor


NIGP: 45057259009
Wedge for Type 1 V-wing Socket


NIGP: 45057256500
V-wing Socket for Type 1 Foundation

NIGP #	OBJECT MARKERS AND CONFORMABLE SHEETING
55083511759	Type 2 OM 4"x4" (3 Needed) for Type 3 Wing Channel Post
55083512906	Type 2 OM 6"x12" (1 needed) for Type 3 Wing Channel Post
80149872006	12" Conformable Reflective Yellow Sheeting for Flexible Posts

NOTES:

1. Type 2 object marker in accordance with Traffic Engineering Standard Delineators & Object Markers.
2. A light weight receptacle for newspaper delivery can be attached to the mailbox, provided it does not touch the mailbox, present a hazard to traffic or delivery of the mail, extend beyond the front of the mailbox, or display advertising, except the publication title.

BID CODES FOR CONTRACTS

MB-(X) ASSM TY (XXX) (X)

Type of Mailbox
S = Single
D = Double
M = Multiple
MP = Molded Plastic

Type of Post
MC = Winged Channel Post
RR = Recycled Rubber
TWW = Thin Walled White Tubing
TWG = Thin Walled Galvalized Tubing
TIM = Timber

Type of Foundation
Ty 1 = V-Loc
Ty 2 = Wedge Anchor Steel System
Ty 3 = Winged Channel post
Ty 4 = Wedge Anchor Plastic System
Ty 5 = 4 X 4 Post

SHEET 4 OF 4

Texas Department of Transportation — Maintenance Division Standard

NIGP PARTS LIST AND COMPATIBILITY

MB(4)-21

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8/2005 1/2013	DIST	COUNTY		SHEET NO.
11/2006 1/2014				

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DATE:

PACKET 4.289 August 9, 2022

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CHECKED:	JCF				
APPROVED:	JCF				
VERT. SCALE:					
HORIZ. SCALE:					
PROJECT NO.:	BPU18-05				
DATE:	MAY 2022	Rev. No.	Date	By	Description

MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT
DETAILS
9 OF 8

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
Josh Ferguson

64A
OF 64

File: P:\Engineering Services\Engineering Projects\2018\BPU18-05 Solomon Pvng & Utils\3 DWG\BPU18-05 DET - Copy.dwg Jun 17, 2022 - 11:33am pilkington

Solomon Lane Paving Bond Project
Non-Mandatory Pre-Bid Meeting Agenda
Project No. BPU19-05
June 22, 2022

Discussion Items

1. Sign-In Sheet

2. Personnel Overview
   - Jose Ortiz – Engineering Services Director
   - Josh Ferguson – Engineering Manager – CIP, project engineer
   - Patricia Kingston – Engineering Tech, project designer
   - Gabe McClelland – Senior Engineering Manager
   - Bobby Wojciechowski – Capital Improvement Project Manager
   - Jesse Trejo – Construction Manager, construction management & inspections
   - Andy Navarro – Franchise Utility Coordinator
   - Jesus Perez – Project Manager
   - Carl Craigo – Utilities Director
   - Rex Swearinger – Water & Wastewater Operations Superintendent, utility coordination
   - Taha Sakrani – Associate Traffic Engineer
   - Troy Clabaugh – Traffic Operations Superintendent
   - Michael Williams – Stormwater Manager
   - Natalie Burgard – Administrative Assistant, document processing
   - Erika Martinez – Purchasing Manager, conduct bid process & bid opening

3. Project Overview and Scope
   - This project will include the removal, replacement, and installation of existing and proposed paving, sidewalk, structures, and appurtenances as well as all equipment, labor, materials, etc. necessary to complete the work outlined in the Construction Drawings and Specifications, and to satisfactorily complete the work.
   - In general, this project involves paving Solomon Lane from 'A' Street to Big Spring Street as well as paving Lazywood Lane and Weeping Willow Lane.

4. Bid Process
   - Pre-Bid meeting attendance is non-mandatory to bid on this project.
   - ATTENTION: All questions submitted before or after the Non-Mandatory Pre-Bid Meeting must be submitted via email to the following email address:

     jferguson@midlandtexas.gov.

   - Addendum distributed by email the Friday afternoon following the Non-Mandatory Pre-Bid Meeting.
     - The deadline to ask or send questions for the Addendum is this Friday, July 1, 2022 at Noon.
     - Questions asked after the Noon deadline will be directed to the information already provided in the bid documents or included in the Addendum.

- Bidders are to submit bids either by mail or in person. If bidders choose to mail their bid packets in, then they are to mail the bid packet to one of the addresses listed below:

  USPS Mailing Address:
  City of Midland, Texas
  Attn: City Secretary's Office
  P.O. Box 1152
  Midland, TX 79702

  – OR –

  Physical Address for mail carriers other than USPS:
  City of Midland, Texas
  Attn: City Secretary's Office
  300 North Loraine St, Suite 330
  Midland, TX 79701

  If bid packets are delivered in person then bidders must drop the bid packets off at the first-floor front desk of City Hall before the bid opening deadline.

- **Bid Opening is Wednesday, June 29, 2022 at 2:00 PM** in the City Hall Council Chamber located on the 1st Floor of Midland's City Hall.
  - The Bid Opening will be open to the public, and bidders are free to attend in person.
  - No late bids will be accepted.
  - Bidders must be willing to sign the contract as is.
  - Bidders must complete the conflict of interest forms if applicable.
  - Bidders must fill out all bid items in the Proposal. If bid items are left blank then the bid will be considered non-responsive.
  - Bidders have sole responsibility for making sure they have and acknowledge all addendums provided. If all acknowledgement forms are not included with the bid packet submittal then the bid will be considered non-responsive.

5. Notice to Proceed
   - Date of Notice to Proceed to be determined at the Pre-Construction Meeting.
   - Pre-Construction Meeting date will be set after the project bid is awarded.

6. Payment
   - Invoices should be submitted on or before the 1st day of each month and cover work completed up to the 25th day of the preceding month.
   - Invoice submittals are to be itemized and match the bid items listed in the bid packet Proposal.
   - Payment based on the portion of work completed only. No payment for material delivery.
   - 5% retainage until project completion, acceptance, and final payment.
   - Recommended that invoices state "Invoice Due Upon Receipt", or have a due date that is two (2) weeks after the date the invoice is submitted.

7. Project Schedule
   - City Inspector must be notified of all work occurring and be able to perform inspections on any construction or installation that occurs.
   - Typically work times are Monday – Friday from 8:00 AM – 5:00 PM. No work earlier than 7:00 AM or later than 8:00 PM without City Permission unless for emergency conditions.
   - Work is not to occur on Sundays or legal holidays unless required for emergency situations.
   - Work is not to occur on Saturdays unless requested by Contractor in writing at least 48-hours in advance and approved by the City Engineer.

8. Project Specifics
   - Comply with all OSHA and other applicable safety requirements and regulations at all times.
   - Construction on this project is to proceed from east to west.
   - Contractor is responsible for maintaining service to adjacent lots during this project.
     - Contractor must notify affected properties at least two (2) business days prior to any planned service interruption.

- Construction staking and survey is solely the responsibility of the Contractor.
- Construction testing is solely the responsibility of the Contractor.
- Contractor is responsible for all Traffic Control for this project.
    - Contractor is responsible for maintaining access to adjacent properties during this project.
        - Special consideration is to be given to the Lazywood Lane and Weeping Willow Lane cul-de-sacs.
    - Contractor is directed to used steel plates or other means as needed to enable access to adjacent properties when work is not actively occurring at an otherwise blocked point of access.
    - Contractor is responsible for coordinating with City Transportation to have any traffic signs removed or relocated as needed by the City.
    - Contractor must notify affected properties at least two (2) business days prior to any planned access interruption.
- Material stored on the project site must be properly stored and protected from damage and weathering.
    - Material and equipment storage is not permitted in the Big Spring Street Right-of-Way, the 'A' Street Right-of-Way, or in Midland Draw.
    - Material and equipment storage should avoid being placed in front of property fronting Solomon Lane when possible.
- Contractor is required to place erosion control BMPs as needed and to regularly maintain any BMPs placed. Project site is to be kept reasonably clean, and any piles of spoils, backfill material, etc. are to include sand bag BMPs or similar temporary erosion protection emplacements at all times.
- Contractor is solely responsible for any and all stabilization, revegetation, etc. needed outside the project area due to construction activity.
- Contractor is responsible for final seeding, vegetation, and watering as outlined in the construction drawings and bid packet.
- Contractor is responsible for striping for this project per the construction drawings and bid packet, including the placement and removal and all temporary pavement tags.
- There is a one (1) calendar year warranty period on this project. This includes all infrastructure installed.

9. Additional Information, Clarifications, and Corrections
    - **Attention:** The construction drawing set is being revised to provide additional dimension information for driveway headwalls as well as adding mailbox foundation details. These design revisions will be included with the addendum.
    - **Attention:** The bid packet's Proposal section is being revised to better distinguish between different headwalls and safety end treatments, as well as correcting the quantities for these bid items. These revisions will be included with the addendum.
    - **Attention:** There is a utility project in progress on Solomon Lane to replace and relocate the existing water main and storm drain before pavement work commences. The utility contractor has precedence on the Solomon Lane project site until their project is complete.
    - All questions and comments brought up prior to the addendum deadline will officially be addressed in the addendum.
    - Bidders are directed to bid the item quantities listed in the Bid Packet's Proposal.
    - Contractor is reminded that this project is in an urban environment. Trees and overhead lines are common, and contractor is to provide proper equipment to complete all required work for this project in an urban environment.

10. Any Additional Questions

Please direct all questions or comments following the Pre-Bid Meeting to Josh Ferguson with the City of Midland.

Engineering Services

Josh Ferguson
Phone: (432) 685-7290
Email: jferguson@midlandtexas.gov

Jesus Perez
Phone: (432) 685-7471
Email: jperez@midlandtexas.gov

Non-Mandatory Pre-Bid Meeting Attendance
SOLOMON LANE PAVING BOND PROJECT
BPU19-05
Date: 06-22-2022 - 3:00 PM

PACKET ☑	Name (Please Print)	Company Name (Please Print)	Phone Number	Fax Number	Email
✓	Josh Ferguson	CoM	(432) 685-7290		jferguson@midlandtexas.gov
	Erika Martine	com			emunoz@ " "
	Mirna Granados	COM			MGranados@" "
	George Williams	Reece Albert Inc	432-528-4450		GeorgeW@reecealbertinc.com
	Skip Klement	Reece Albert, Inc.	325-653-1241		skip@reecealbertinc.com
	Mike Hester	REECE ALBERT, Inc	432-570-0481		MikeH@REECEALBERT Inc. com
	Jesse Ramirez	Reece Albert, Inc.	432-570-0481		jesser@reecealbertinc.com
	Salvador Armenta	Jones Bros.	432)634-8815		S.armenta@Jonesdp.com
	Brent Clayton	Desert Paving	432-413-4704		BRENT@DESERTPAVING.US
	JESSE TREJO	COM			JTREJO@MIDLANDTEXAS.GOV
	Taha Sakrani	COM	432-685-7511		tsakrani@midlandtexas.gov

4.294

August 9, 2022

MIDLAND
Engineering Services

ADDENDUM #02

Project Number BPU19-05

TO ALL BIDDERS ON THE SUBJECT BID: Solomon Lane Paving Bond Project

ADDENDUM #02

DATE: July 8, 2022

1. Q/A and Clarification
2. Revised Proposal
3. Revised Pay Notes

PLEASE RETURN THIS ADDENDUM WITH YOUR BID BY THE CLOSING DATE.

All other terms and conditions shall remain the same.

Permian Paving Inc.
Company Name

John McDonald II
Bidder Authorized Signature

July 8th 2022
Date

JOHN McDonald II
Please Print Above Name

432-425-1214
Phone

Solomon Lane Paving Bond Project
Project Number BPU19-05

Q/A and Clarification

The following questions were raised by one or more bidders after Addendum 01 was distributed for this project. Below is a list of the questions along with the answers and clarifications.

Clarification: This Addendum 02, issued on Friday, July 8, 2022, is the second of two addendums that have been issued for this Solomon Lane Paving Bond Project. The first addendum, Addendum 01, was issued by the City of Midland on June 24, 2022.

Clarification: All addendum acknowledgement forms must be included with the bid for the bid to be considered complete. This includes addendum acknowledgement forms for both Addendum 01 and Addendum 02. Bidders have sole responsibility for making sure they have and acknowledge all addendums provided for this project bid.

Clarification: All information provided in Addendum 01 remains in effect unless specifically addressed in Addendum 02.

Clarification: The Bid Opening location for this project is hereby moved to the Main Conference Room in the Basement at Midland's City Hall. All other requirements, rules, directions, instructions, information, etc. regarding the bid submittal process remain unchanged by this Addendum 02.

Clarification: The Proposal section of the Bid Packet has been revised. The revised version is attached to this Addendum 02. Bidders are to remove all previous versions of the Proposal section in their entirety and replace them with the revision attached to this Addendum 02.

Storm Drain Bid Item 4 will now say "Pipe Anchors & Runners for Box Culvert Headwall" rather than "Box Culvert Headwall Safety End Treatment".

Storm Drain Bid Item 5 will now say "Pipe Anchors & Runners for Pipe Culvert Headwall" rather than "Pipe Culvert Headwall Safety End Treatment".

The quantity for Traffic Bid Item 6, Rubber Median, has been revised to correct quantity and description errors.

Remove the original Proposal section in its entirety and replace it with the revised Proposal section attached to this Addendum 02.

Headwall structures are often installed without the pipe anchors and pipe runners indicated in the TxDOT details seen on Sheets 62 and 63 of the construction drawing set. To reflect this while keeping bid items as consistent as possible from one City project to the next the City of Midland

originally chose to use two separate bid items for these structures, a "Headwall" bid item for the concrete structure and a "Safety End Treatment" bid item for the pipe anchors and runners as well as anything needed to attach them to the concrete headwall structure. Unfortunately, it is now obvious that using "Safety End Treatment" to describe the pipe anchors and runners was not the best option and simply caused confusion. Therefore "Pipe Anchors & Runners" will be used instead for this project in this bid.

Clarification: The Pay Notes section of the Bid Packet has been revised. The revised version is attached to this Addendum 02. Bidders are to remove all previous versions of the Pay Notes section in their entirety and replace them with the revision attached to this Addendum 02.

Storm Drain Bid Item 4 will now say "Pipe Anchors & Runners for Box Culvert Headwall" rather than "Box Culvert Headwall Safety End Treatment".

Storm Drain Bid Item 5 will now say "Pipe Anchors & Runners for Pipe Culvert Headwall" rather than "Pipe Culvert Headwall Safety End Treatment".

Storm Drain Pay Note SD3 has been revised to reflect the name changes of Storm Drain Bid Items 4 and 5.

Remove the original Pay Notes section in its entirety and replace it with the revised Pay Notes section attached to this Addendum 02.

Question: There's a bid item (bid item 2) for headwalls (6 EA) for the 4' X 2' box culvert but there's also a bid item (bid item 4) for SET's (6 EA) for the 4' X 2' box culvert? Since your details show SET's I'm assuming that's what you want. Shouldn't bid item 2 be deleted?

Answer: No, Storm Drain Bid Item 2 should not be deleted. The City does want the pipe anchors and runners installed, but the issue described here is the result of confusion about the City's use of the SET description up till now in the bid documents. The Proposal and Pay Notes have been revised as described in the previous Clarification and as seen in the revisions attached to this Addendum 02 to address this issue.

Question: I sent that last email too quickly (*i.e. the previous question listed above*). You have the same scenario on the 12" RCP. Bid item 3 shows headwalls (2 EA) for the 12" RCP and bid item 5 shows SET's (2 EA) for the 12" RCP?

Answer: See the answer provided for the previous question for this response as well.

Question: Will the City of Midland require Construction Materials Testing (soils concrete, asphalt, structural inspections, etc.) on this project, not already contracted out by project owner or others? Please let us know at your earliest, so we can propose accordingly. If services are required, do we submit proposals directly to the City or others?

Answer: Testing requirements for this project will be as stated in the Bid Packet's Special Provisions, 17. TESTING.

Question: Traffic Item #6 Rubber Median shows 11ea the drawing show 15. The detail shows 1 end cap, are we installing only one or two, one on each end?

Answer: Traffic Bid Item 6 should have a quantity of 15 EA rather than 11 EA. This has been corrected as part of the revisions described in the previous 5th and 6th Clarifications in this Addendum 02. The Rubber Curb Detail Note 2 states that "each rubber curb assembly shall consist of (1) center module and (2) end caps", and therefore two end caps should be installed, one at each end of each center module.

Question: The revised storm drain bid items 2 through 5 from addendum 1 are now separated out into "reinforced concrete headwall" and "Headwall safety end treatment" but the only details in the plans are for SETs. Please confirm both a headwall and SET are required and provide specifics on headwall height since there is no headwall guidance or information in plans and details.

Answer: See previous Clarifications and answers in this Addendum 02 addressing revisions to the bid packet's Proposal and Pay Notes sections. Both the concrete headwall structure and the pipe anchors and runners are to be installed as part of this project, along with all necessary incidentals required to do so.

Length, width, height, and elevation dimensions for the box culvert headwalls can be found in the Keyed Notes on Sheet 49 of the construction drawing set.

The revised Sheet 37 included with Addendum 01 added length dimensions measuring from the ends of the 12" pipe culvert back to the nearest driveway pavement edge, with both lengths being 5.0' in this case. Grade points 22 and 39 in the driveway grade point tables on the same sheet provide the elevations for the pipe culvert flowline and the finished surface of the driveway pavement, and the difference of those elevations will provide the heights needed for the pipe culvert headwalls. The headwall widths at these locations should be 2.0' centered on the 12" pipe culvert to ensure a minimum 0.5' width of concrete rap on either side of the pipe culvert opening. Is maintained

PROPOSAL

TO: Honorable Mayor and City Council
City of Midland
Midland, Texas

Gentlemen: The undersigned bidder, having examined the drawings, specifications and contract documents, the location of the proposed work, and being fully advised as to the extent and character of the work, proposes to furnish all material, equipment, and to perform all labor and work necessary for the completion of the construction of the work described by and in accordance with the attached drawings, specifications, and contract, for the following prices, to wit:

Project Name: Solomon Lane Paving Bond Project

Project Number: BPU19-05

Miscellaneous Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	7 MO	Mobilization, furnished, installed, complete and in place, for the sum of: _____ dollars and _____ cents per month. (Pay Note M1)	$_____	$_____
2)	7 MO	Erosion/Sediment Control, furnished, installed, complete and in place, for the sum of: _____ dollars and _____ cents per month. (Pay Note M2)	$_____	$_____
3)	7 MO	Traffic Control, furnished, installed, complete and in place, for the sum of: _____ dollars and _____ cents per month. (Pay Note M3)	$_____	$_____
4)	7 MO	Job Site Safety, furnished, installed, complete and in place, for the sum of: _____ dollars and _____ cents per month. (Pay Note M4)	$_____	$_____
5)	6970 SY	Seeding & Stabilization, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note M5)	$_____	$_____

Miscellaneous Items				
Item No.	Quantity	Description	Unit Price	Total Amount
6)	1 LS	Spray Watering, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per lump sum. (Pay Note M6)	$_____	$_____
Total Miscellaneous Items 1-6		$_____		

Demolition Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	23180 SY	Unclassified Roadway Excavation (Depth ≤ 12”), complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D1)	$_____	$_____
2)	500 CY	Unclassified Ditch Excavation, complete and in place, for the sum of: _____dollars and _____cents per cubic yard. (Pay Note D2)	$_____	$_____
3)	14900 SY	Removal & Dispose of Existing Unclassified Pavement, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D3)	$_____	$_____
4)	240 SY	Removal & Disposal of Existing Unclassified Concrete Pavement, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D4)	$_____	$_____
5)	3020 SY	Removal & Disposal of Existing Unclassified Driveway Approaches, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D5)	$_____	$_____
6)	1320 LF	Removal & Disposal of Existing Concrete Curb & Gutter, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note D6)	$_____	$_____
7)	20 SY	Removal & Disposal of Existing Concrete Sidewalk & Ramps, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note D7)	$_____	$_____

Demolition Items				
Item No.	Quantity	Description	Unit Price	Total Amount
8)	45 LF	Removal & Disposal of Existing Guard Rail, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note D8)	$_____	$_____
Total Demolition Items 1-8		$_____		

Storm Drain Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	120 LF	4.0' x 2.0' Reinforced Concrete Box Culvert furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note SD1)	$_____	$_____
2)	6 EA	Box Culvert Reinforced Concrete Headwall, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note SD2)	$_____	$_____
3)	2 EA	Pipe Culvert Reinforced Concrete Headwall, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note SD2)	$_____	$_____
4)	6 EA	Pipe Anchors & Runners for Box Culvert Headwall, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note SD3)	$_____	$_____
5)	2 EA	Pipe Anchors & Runners for Pipe Culvert Headwall, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note SD3)	$_____	$_____
6)	42 LF	12" Reinforced Concrete Pipe furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note SD4)	$_____	$_____
7)	102 LF	12" Reinforced Concrete Trench Drain, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note SD5)	$_____	$_____
Total Storm Drain Items 1-7		$_____		

Structural Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	45 LF	Guard Rail, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note S1)	$_____	$_____
2)	7 EA	Relocate Mailbox Foundation, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note S2)	$_____	$_____
Total Structural Items 1-2		$_____		

Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	23180 SY	Subgrade Preparation (Depth ≤ 8”), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P1)	$_____	$_____
2)	2060 CY	Unclassified Embankment (Density Controlled), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per cubic yard. (Pay Note P2)	$_____	$_____
3)	1710 SY	7” Jointed Concrete Pavement, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P3)	$_____	$_____
4)	1880 TON	2” Type D HMAC Asphalt Pavement Surface Course (PG70-22, 110 LBS / SY @ 1” Thick), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per ton. (Pay Note P4)	$_____	$_____
5)	1880 TON	2” Type C HMAC Asphalt Pavement Surface Course (PG64-22, 110 LBS / SY @ 1” Thick), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per ton. (Pay Note P5)	$_____	$_____
6)	3 EA	Concrete-Asphalt Pavement Transition Sleeper Slab, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note P6)		
7)	21470 SY	8” Flexible Base (Type A, Grade 4), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P7)	$_____	$_____

Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
8)	1710 SY	6" Flexible Base (Type A, Grade 4), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P7)	$_____	$_____
9)	3420 GAL	Bituminous Prime Coat (MC-30, 0.20 Gal / SY), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per gallon. (Pay Note P8)	$_____	$_____
10)	1710 GAL	Tack Coat (MC-30, 0.10 Gal / SY), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per gallon. (Pay Note P9)	$_____	$_____
11)	420 SY	6" Concrete Fillet, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P10)	$_____	$_____
12)	540 SY	6" Concrete Valley Gutter, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P11)	$_____	$_____
13)	2330 SY	6" Concrete Driveway Approach, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P12)	$_____	$_____
14)	20 SY	4" Concrete Sidewalk, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per square yard. (Pay Note P13)	$_____	$_____

Paving Items				
Item No.	Quantity	Description	Unit Price	Total Amount
15)	36 LF	Type A Concrete Curb & Gutter, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note P14)	$_____	$_____
16)	10230 LF	Concrete Ribbon Curb & Gutter, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note P14)	$_____	$_____
17)	1 EA	Manhole Ring & Cover Adjustment, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note P15)	$_____	$_____
18)	23 EA	Water Valve Box Ring & Cover Adjustment, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note P15)	$_____	$_____
Total Paving Items 1-18		$_____		

Traffic Items				
Item No.	Quantity	Description	Unit Price	Total Amount
1)	16,980 LF	Retroreflectorized Pavement Markings (White, 4") (TxDOT Item 666, Type I) (Solid), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note T1)	$_____	$_____
2)	525 LF	Retroreflectorized Pavement Markings (White, 4") (TxDOT Item 666, Type I) (Dot), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note T1)	$_____	$_____
3)	4810 LF	Retroreflectorized Pavement Markings (Yellow, 4") (TxDOT Item 666, Type I) (Solid/Solid), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note T1)	$_____	$_____
4)	54 LF	Prefabricated Pavement Markings (White, 24") (TxDOT Item 668) (Solid), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per linear foot. (Pay Note T2)	$_____	$_____
5)	14 EA	Prefabricated Pavement Markings (White, Bike Lane Symbol) (TxDOT Item 668), furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note T3)	$_____	$_____
6)	15 EA	Rubber Median, furnished, installed, complete and in place, for the sum of: _____dollars and _____cents per each. (Pay Note T4)	$_____	$_____
Total Traffic Items 1-6		$_____		

Price For:	
1. Miscellaneous Items	$_____
2. Demolition Items	$_____
3. Storm Drain Items	$_____
4. Structural Items	$_____
5. Paving Items	$_____
6. Traffic Items	$_____
Total Price	$_____

In addition to providing the individual prices for the items above, Contract shall write the total bid amount in the sum of

_____dollars

and _____ cents total.

The undersigned bidder hereby declares that he has visited the site of the work and has carefully examined the contract documents pertaining to the work covered by the above bid. The selected contractor will receive written notice to proceed.

Bidder agrees to substantially complete all work within _210_ calendar days after receipt of notice to proceed.

PUBLIC INFORMATION

To the extent that Bidder is submitting a bid for a contract described by Section 552.371 of the Texas Government Code, Bidder agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this bid, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

Enclosed herewith in this proposal is a cashier's check, cash or bid bond on a form approved by the City Attorney, for

_____dollars

and _____ cents total. ($_____)

which it is agreed shall be collected and retained by the owner as liquidated damages in the event this proposal is accepted by the Owner within thirty days (30) after the date advertised for the reception of bids and the undersigned fails to execute the contract and required bonds with the owner, under the

conditions thereof, within (15) days after the date said proposal is accepted; otherwise said check or bond shall be returned to the undersigned on demand.

Name of Contractor		
Submitted By	Print Name and Title	
Mailing Address		
City	State	Zip

PAY NOTES

BPU19-05 Solomon Lane Paving Bond Project

Bid Item		Pay Quantity Note
Miscellaneous Items		
1	Mobilization	M1
2	Erosion/Sediment Control	M2
3	Traffic Control	M3
4	Job Site Safety	M4
5	Seeding & Stabilization	M5
6	Spray Watering	M6
Demolition Items		
1	Unclassified Roadway Excavation (Depth ≤ 12")	D1
2	Unclassified Ditch Excavation	D2
3	Removal & Disposal of Existing Unclassified Pavement	D3
4	Removal & Disposal of Existing Unclassified Concrete Pavement	D4
5	Removal & Disposal of Existing Unclassified Driveway Approach	D5
6	Removal & Disposal of Existing Concrete Curb & Gutter	D6
7	Removal & Disposal of Existing Concrete Sidewalk & Ramps	D7
8	Removal & Disposal of Existing Guard Rail	D8
Storm Drain Items		
1	4.0' x 2.0' Reinforced Concrete Box Culvert	SD1
2	Box Culvert Reinforced Concrete Headwall	SD2
3	Pipe Culvert Reinforced Concrete Headwall	SD2
4	Pipe Anchors & Runners for Box Culvert Headwall	SD3
5	Pipe Anchors & Runners for Pipe Culvert Headwall	SD3
6	12" Reinforced Concrete Pipe Driveway Culvert Crossing	SD4
7	Reinforced Concrete Trench Drain Driveway Culvert Crossing	SD5
Structural Items		
1	Guard Rail	S1
2	Relocate Mailbox Foundation	S2

Paving Items

1	Subgrade Preparation (Depth ≤ 8")	P1
2	Unclassified Embankment (Density Controlled)	P2
3	7" Jointed Concrete Pavement	P3
4	2" Type D HMAC Asphalt Pavement Surface Course (PG70-22, 110 LBS / SY @ 1" Thick)	P4
5	2" Type C HMAC Asphalt Pavement Surface Course (PG64-22, 110 LBS / SY @ 1" Thick)	P5
6	Concrete-Asphalt Pavement Transition Sleeper Slab	P6
7	8" Flexible Base (Type A, Grade 4)	P7
8	6" Flexible Base (Type A, Grade 4)	P7
9	Bituminous Prime Coat (MC-30, 0.20 Gal / SY)	P8
10	Tack Coat (MC-30, 0.10 Gal / SY)	P9
11	6" Concrete Fillet	P10
12	6" Concrete Valley Gutter	P11
13	6" Concrete Driveway Approach	P12
14	4" Concrete Sidewalk	P13
15	Type A Concrete Curb & Gutter	P14
16	Concrete Ribbon Curb & Gutter	P14
17	Manhole Ring & Cover Adjustment	P15
18	Water Valve Box Ring & Cover Adjustment	P15

Traffic Items

1	Retroreflectorized Pavement Markings (White, 4")(Solid)	T1
2	Retroreflectorized Pavement Markings (White, 4")(Dot)	T1
3	Retroreflectorized Pavement Markings (Yellow, 4")(Solid/Solid)	T1
4	Prefabricated Pavement Markings (White, 24")(Solid)	T2
5	Prefabricated Pavement Markings (White, Bike Lane Symbol)	T3
6	Rubber Median	T4

PAY QUANTITY NOTES

M1 Includes the necessary equipment, labor, materials, and incidentals for all Mobilization to the job site complete and in place. Measurement and payment to be made per month.

M2 Includes the necessary equipment, labor, materials, and incidentals to implement the Erosion Control Plan per the construction drawings and City of Midland standards and specifications. Measurement and payment to be made per month.

M3 Includes the necessary equipment, labor, materials, and incidentals to implement the Traffic Control per the approved Traffic Control Plan. Any required traffic control devices are to meet the City of Midland Traffic Division Standards. Measurement and payment to be made per month.

M4 Includes the necessary equipment, labor, materials, and incidentals to implement Job Site Safety and to provide a safe work environment for the project work area (including all personal protection equipment, trench safety, etc.) per the construction drawings and in compliance with all applicable Federal, State, and Local requirements or regulations including those of OSHA and the City of Midland. JOB SITE SAFETY IS THE RESPONSABILITY OF THE CONTRACTOR. Measurement and payment to be made per month.

M5 Includes the necessary equipment, labor, materials, and incidentals for Seeding & Stabilization per the construction drawings and City of Midland standards and specifications, including all removal, storage, and replacement of existing topsoil as well as all seeding and appurtenances. Watering is addressed in a separate pay note. Measurement and payment to be made per square yard measured along the ground surface.

M6 Includes the necessary equipment, labor, materials, and incidentals for Spray Watering per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per lump sum.

D1 Includes the necessary equipment, labor, materials, and incidentals for Unclassified Excavation per the construction drawings and City of Midland standards and specifications including all existing pavement and sub-structure removal, unclassified excavation, material removal, and appurtenances. Measurment and payment to be per square yard measured along the ground surface.

D2 Includes the necessary equipment, labor, materials, and incidentals for Unclassified Excavation per the construction drawings and City of Midland standards and specifications including all existing pavement and sub-structure removal, unclassified excavation, material removal, and appurtenances. Measurment and payment to be per cubic yard of material removed.

D3 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Pavement per the construction drawings and City of Midland standards and specifications including all pavement removal, saw-cutting, and appurtenances. Depths given are approximate and pavement material is to be removed in its entirety. No additional compensation will be made for increased pavement depth removal. Measurement and payment to be made per square yard measured along the ground surface.

D4 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Concrete Pavement per the construction drawings and City of Midland standards and specifications including all pavement removal, saw-cutting, and appurtenances. Depths given are approximate and pavement material is to be removed in its entirety. No additional compensation will be made for increased pavement depth removal. Measurement and payment to be made per square yard measured along the ground surface.

D5 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Unclassified Driveway Approach per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

D6 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Concrete Curb & Gutter per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot measured along the back of curb.

D7 Includes the necessary equipment, labor, materials, and incidentals for the Removal & Disposal of Existing Concrete Sidewalk & Ramps per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

D8 Includes the necessary equipment, labor, materials, and incidentals to Remove & Dispose of Existing Guard Rail per the construction drawings and City of Midland standards and specifications, including removal of all, columns, posts, foundations, anchors, gates, frames, and structures as well as all excavation, backfill, cutting, and appurtenances. Measurement and payment to be made per linear foot measures along the ground surface following the guard rail centerline through all structures and appurtenances.

SD1 Includes the necessary equipment, labor, materials, and incidentals for the installation of Reinforced Concrete Box Culvert per the construction drawings and City of Midland standards and specifications, including all embedment, detector wire, tracer tape, necessary testing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the box culvert centerline through all structures and appurtenances.

SD2 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Reinforced Concrete Headwall per the construction drawings and City of Midland standards and specifications, including all forms, reinforcment, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per each concrete headwall installed.

SD3 Includes the necessary equipment, labor, materials, and incidentals for the installation of Pipe Anchors & Runners for Culvert Headwalls per the construction drawings and City of Midland standards and specifications, including all forms, reinforcment, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per each culvert headwall the pipe anchors and runners are installed at.

SD4 Includes the necessary equipment, labor, materials, and incidentals for the installation of Reinforced Concrete Pipe Driveway Culvert Crossing per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, base, forms, pipe, reinforcement, structures, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the pipe centerline through all structures and appurtenances.

SD5 Includes the necessary equipment, labor, materials, and incidentals for the installation of a Reinforced Concrete Trench Drain Driveway Culvert Crossing per the construction drawings and City of Midland standards and specifications, including all excavation, embedment, base, forms, pipe, reinforcement, structures, placement, sealing, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the trench drain centerline through all structures and appurtenances.

S1 Includes the necessary equipment, labor, materials, and incidentals to install a Guard Rail per the construction drawings and City of Midland standards and specifications, including all columns, posts, foundations, anchors, and structures as well as all excavation, backfill, cutting, and appurtenances. Measurement and payment to be made per linear foot measured along the ground surface following the guard rail centerline through all structures and appurtenances.

S2 Includes the necessary equipment, labor, materials, and incidentals to Relocate Mailbox Foundation per the construction drawings and City of Midland standards and specifications, including all structure removal, foundation placement, and appurtenances. Measurement and payment to be made per each existing mailbox foundation removed and new mailbox foundation set.

P1 Includes the necessary equipment, labor, materials, and incidentals for Subgrade Preparation per the construction drawings and City of Midland standards and specifications, including all proof-rollling, sub-grade reworking, scarifying, compaction, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P2 Includes the necessary equipment, labor, materials, and incidentals for placement of Unclassified Embankment per the construction drawings and City of Midland standards and specifications, including all sprinkling, rolling, correction of soft spots, grading, sloping, compaction, and appurtenances. Measurement and payment to be made per each cubic yard placed.

P3 Includes the necessary equipment, labor, materials, and incidentals for placement of Jointed Concrete Pavement per the construction drawings and City of Midland standards and specifications, including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P4 Includes the necessary equipment, labor, materials, and incidentals for the placement of Type "D" HMAC Asphalt Pavement Surface Course (PG 70-22, 110 LBS / SY at 1" thick) per the construction drawings and City of Midland standards and specifications, including all placement, compaction, and appurtenances. Measurement and payment to be made per ton of material placed.

P5 Includes the necessary equipment, labor, materials, and incidentals for the placement of Type "C" HMAC Asphalt Pavement Surface Course (PG 64-22, 110 LBS / SY at 1" thick) per the construction drawings and City of Midland standards and specifications, including all placement, compaction, and appurtenances. Measurement and payment to be made per ton of material placed.

P6 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete-Asphalt Pavement Transition Sleeper Slab per the construction drawings and City of Midland standards and specifications, including all forming, reinforcement, placement, finishing, and appurtenances. Measurement and payment to be made per each.

P7 Includes the necessary equipment, labor, materials, and incidentals for placement of Flexible Base compacted to 95% Density, ASTM D1557, per the construction drawings and City of Midland standards and specifications including all placement, compaction, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P8 Includes the necessary equipment, labor, materials, and incidentals for application of Bituminous Prime Coat (MC-30, 0.20 GAL / SY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per gallon of material applied at the designated rate.

P9 Includes the necessary equipment, labor, materials, and incidentals for application of Tack Coat (MC-30, 0.10 GAL / SY) per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per gallon of material applied at the designated rate.

P10 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Fillet per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Curb section is formed and poured monolithically with fillet and is not a separate bid item. Measurement and payment to be made per square yard measured along the ground surface.

P11 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Valley Gutter per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P12 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Driveway Approach per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. Pedestrian access ramps at the driveway approach are considered part of the approach and are not a separate bid item. Measurement and payment to be made per square yard measured along the ground surface.

P13 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Sidewalk per the construction drawings and City of Midland standards and specifications, including all forming, reinforcement, placement, jointing, finishing, and appurtenances. Measurement and payment to be made per square yard measured along the ground surface.

P14 Includes the necessary equipment, labor, materials, and incidentals for placement of Concrete Curb & Gutter per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, finishing, and appurtenances. Measurement and payment to be made per linear foot measured along the back-of-curb.

P15 Includes the necessary equipment, labor, materials, and incidentals for Ring & Cover Adjustment per the construction drawings and City of Midland standards and specifications including all forming, reinforcement, placement, jointing, sealing, finishing, and appurtenances. This includes a minimum 1.0' wide concrete collar whose width is measured from the outer edge of the cover to the outer edge of the concrete ring. Measurement and payment to be made per each adjustment made.

T1 Includes the necessary equipment, labor, materials, and incidentals for the placement of Retroreflectorized Pavement Markings per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot placed.

T2 Includes the necessary equipment, labor, materials, and incidentals for the placement of Prefabricated Pavement Markings per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per linear foot placed.

T3 Includes the necessary equipment, labor, materials, and incidentals for the placement of Prefabricated Pavement Markings per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per each marking placed.

T4 Includes the necessary equipment, labor, materials, and incidentals for the installation of Rubber Median per the construction drawings and City of Midland standards and specifications, including all appurtenances. Measurement and payment to be made per each median installed.

SOLOMON LANE PAVING BOND PROJECT
PROJECT NUMBER: BPU19-05
MAY 2022

MAYOR

PATRICK PAYTON

COUNCIL MEMBERS

SCOTT DUFFORD	DISTRICT 1
JOHN NORMAN	DISTRICT 2
JACK LADD	DISTRICT 3
LORI BLONG	DISTRICT 4
DAN CORRALES	AT LARGE
ROBIN POOLE	AT LARGE

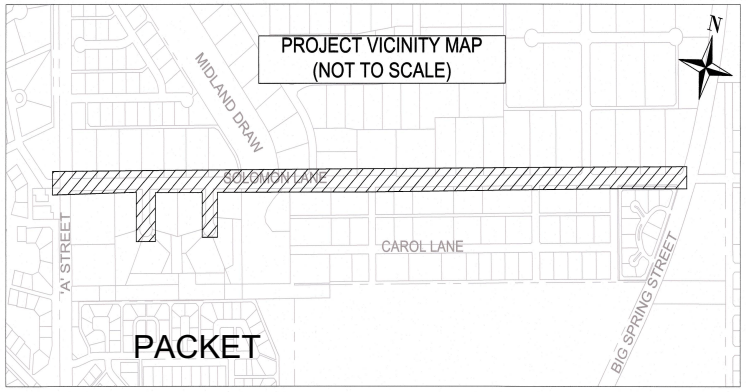
CONTRACTOR _____

DATE WORK BEGAN _____

DATE WORK COMPLETED _____

DATE WORK ACCEPTED _____

FINAL CONTRACT COST _____



CITY MANAGER
ROBERT PATRICK

ENGINEERING SERVICES DIRECTOR
JOSE E. ORTIZ, P.E.

PROJECT ENGINEER
JOSHUA C. FERGUSON, P.E.
OFFICE: (432) 685-7290
EMAIL: JFERGUSON@MIDLANDTEXAS.GOV

CITY OF MIDLAND, 300 N. LORAINE ST.,
MIDLAND, TX 79701

August 9, 2022

SHEET INDEX	
SHEET	DESCRIPTION
1	COVER
2	GENERAL NOTES
3 TO 6	TYPICAL SECTION
7 TO 9	EXISTING CONDITIONS
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57 TO 64	DETAILS

811 Know what's below. Call before you dig.

							Description
							By
							Date
							Rev. No.
DRAWN/DESIGNED:	PAK						
CHECKED:	JCF						
APPROVED:	JCF						
VERT. SCALE:							
HORIZ. SCALE:							
PROJECT NO.:	BPU19-05						
DATE:	MAY 2022						

MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT

COVER SHEET

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31, 2022

File: P:\Engineering Survival\Engineering Projects\2019\BPU19-05 Solomon Pvng & Utils\3 DWG\Plans PVNG\Sh1 CVR.dwg May 31, 2022 - 8:27am jdaughton

GENERAL NOTES

GENERAL NOTES:

1. THIS DESIGN IS FOR PUBLIC PAVING IMPROVEMENTS AT SOLOMON LANE FROM 'A' STREET TO BIG SPRING STREET (HWY 349).
2. ALL CONSTRUCTION IS TO COMPLY WITH CITY OF MIDLAND STANDARDS AND SPECIFICATIONS WHEREVER APPLICABLE. ALL OTHER STANDARDS AND REQUIREMENTS ARE TO COMPLY WITH ALL APPLICABLE FEDERAL AND STATE REGULATIONS, REQUIREMENTS, AND STANDARDS. WHEREVER CITY OF MIDLAND STANDARDS AND FEDERAL OR STATE REQUIREMENTS DIFFER THE MORE RESTRICTIVE STANDARD, REQUIREMENT, OR REGULATION WILL GOVERN.
3. ALL BEARINGS, DIMENSIONS, AND COORDINATES SHOWN IN THIS CONSTRUCTION DRAWING SET ARE RELATED TO TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS CENTRAL ZONE, NORTH AMERICAN DATUM 1983. ALL ELEVATIONS ARE RELATED TO NORTH AMERICAN VERTICAL DATUM 1988.
4. EXISTING ELEVATIONS AND TOPOGRAPHIC FEATURES SHOWN IN THIS CONSTRUCTION DRAWING SET HAVE BEEN LOCATED USING CITY OF MIDLAND RECORDS, SITE INSPECTIONS, SURVEYS, ONE CALL MARKINGS, AND PRIVATE INFRASTRUCTURE OWNER RECORDS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THIS INFORMATION PRIOR TO CONSTRUCTION AND NOTIFYING ENGINEER OF ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND PROJECT DESIGN.
5. EXISTING UTILITIES, INFRASTRUCTURE, AND OTHER OBJECTS INDICATED IN THIS CONSTRUCTION DRAWING SET HAVE BEEN LOCATED USING CITY OF MIDLAND RECORDS, SURVEYS, ONE CALL MARKINGS, AND PRIVATE INFRASTRUCTURE OWNER RECORDS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THIS INFORMATION PRIOR TO CONSTRUCTION AND NOTIFYING ENGINEER OF ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND PROJECT DESIGN.
6. CONTRACTOR IS TO TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING FACILITIES THAT ARE ENCOUNTERED REGARDLESS OF WHETHER OR NOT THEY APPEAR IN THIS CONSTRUCTION DRAWING SET.
7. ANY ISSUES, CONFLICTS, OR DISCREPANCIES ENCOUNTERED IN FIELD THAT CONFLICT WITH THIS CONSTRUCTION DRAWING SET ARE TO BE BROUGHT TO ATTENTION OF PROJECT ENGINEER PRIOR TO MAKING ANY DESIGN CHANGES IN FIELD.
8. TRAFFIC CONTROL FOR THIS PROJECT WILL BE CONTRACTOR'S RESPONSIBILITY. CONTRACT MUST SUBMIT TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH TMUTCD, TO CITY OF MIDLAND FOR REVIEW AND APPROVAL NO LESS THAN TWO (2) BUSINESS DAYS BEFORE CONTRACTOR BEGINS ANY CONSTRUCTION ACTIVITY.
9. CONTRACTOR IS TO NOTIFY ALL AFFECTED PROPERTIES AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY KNOWN OR PLANNED INTERRUPTION OF SERVICE OR ACCESS DUE TO ANY CONSTRUCTION ACTIVITY PERFORMED BY CONTRACTOR.
10. THERE IS TO BE NO MATERIAL STORAGE WITHIN MIDLAND DRAW. MATERIAL STORAGE IS TO BE PLACED IN WORK ZONE IDENTIFIED IN APPROVED TRAFFIC CONTROL PLAN.
11. OSHA REQUIREMENTS AND ALL OTHER APPLICABLE FEDERAL, STATE, OR CITY OF MIDLAND SAFETY REQUIREMENTS ARE TO BE FOLLOWED AND COMPLIED WITH AT ALL TIMES.
12. CONTRACTOR MUST COMPLY WITH ALL STAKING AND TESTING REQUIREMENTS AS DESCRIBED IN PROJECT BID PACKET.
13. CONTRACTOR IS REMINDED THAT THIS PROJECT IS LOCATED IN AN URBAN ENVIRONMENT. TREES AND OVERHEAD LINES ARE COMMON, AND CONTRACTOR IS TO PROVIDE PROPER EQUIPMENT TO COMPLETE ALL REQUIRED WORK FOR THIS PROJECT IN AN URBAN ENVIRONMENT.

DEMOLITION NOTES:

A. CONTRACTOR IS TO NOTIFY PROJECT ENGINEER OF ANY ADDITIONAL DEMOLITION THAT MAY BE NEEDED AND RECEIVE WRITTEN CONFIRMATION THAT SUCH DEMOLITION IS APPROVED PRIOR TO ANY ADDITIONAL DEMOLITION TAKING PLACE.
B. CONTRACTOR IS TO TAKE CARE NOT TO DAMAGE OR REMOVE ANY EXISTING INFRASTRUCTURE OR PROPERTY, PUBLIC OR PRIVATE, THAT IS NOT INDICATED BY THIS CONSTRUCTION DRAWING SET. ANY SUCH DAMAGE OR REMOVAL MUST BE REPLACED OR REPAIRED BY CONTRACTOR AT THEIR SOLE EXPENSE TO EQUAL OR BETTER CONDITION.
C. ALL SAW-CUTS FOR PAVEMENT REMOVAL ARE TO HAVE CLEAN, STRAIGHT EDGES AND ARE CONSIDERED INCIDENTAL TO ALL PROJECT WORK.
D. ANY EXISTING MAILBOX FOUNDATION TO BE REMOVED BY CONTRACTOR PER THIS CONSTRUCTION DRAWING SET CANNOT BE REMOVED UNTIL AFTER EXISTING MAILBOX IS REMOVED BY OWNER. CONTRACTOR CANNOT REMOVE EXISTING MAILBOXES..

CONSTRUCTION NOTES:

1. ALL DIMENSIONS MEASURED TO CURB ARE MEASURED TO LIP-OF-CURB.
2. ALL NEW OR EXISTING VALVE, MANHOLE JUNCTION, INLET, AND METER COVERS MUST BE ADJUSTED TO FINISHED GRADE AND BE SET FLUSH WITH ADJACENT FINISHED SURFACE WHETHER FINISHED SURFACE IS PAVED OR UNPAVED.
3. CONCRETE COLLARS ARE TO BE PLACED AROUND ALL PUBLIC INFRASTRUCTURE UTILITY COVERS EXCEPT METER COVERS EVEN WHEN SUCH COVERS ARE LOCATED IN UNPAVED OR CONCRETE PAVED AREAS.
4. ALL CONCRETE FIBER REINFORCEMENT IS TO BE INSTALLED AT A RATE OF 3.0-POUNDS OF FIBER REINFORCEMENT PER EACH 1.0-CUBIC YARD OF CONCRETE PLACED (3.0-LBS / 1.0-CY) UNLESS OTHERWISE NOTED IN THIS CONSTRUCTION DRAWING SET.
5. ALL CONCRETE PAVEMENT, FILLET, VALLEY GUTTER, APPROACH, AND COLLAR JOINTS ARE TO BE SEALED PER CITY STANDARDS.
6. CONTRACTOR IS TO MATCH DESIGN GRADES AND ELEVATIONS SHOWN ON THIS CONSTRUCTION DRAWING SET.
7. CONTRACTOR IS TO MATCH EXISTING GRADES AT ALL LOCATIONS INDICATED, INCLUDING FOR ALL GRADE DAYLIGHTING.
8. COORDINATE ALL SIGNAL POLE, SIGNAL CONDUIT, STRIPING, TRAFFIC SIGN, OR OTHER TRAFFIC INFRASTRUCTURE ISSUES WITH CITY TRAFFIC ENGINEER AND NOTIFY CITY INSPECTOR.
9. CONTRACTOR IS TO CONTACT CITY TRANSPORTATION FOR REMOVAL, RELOCATION, OF REPLACEMENT OF EXISTING TRAFFIC SIGNS IN CONFLICT WITH NEW INFRASTRUCTURE PRIOR TO ANY CONSTRUCTION ACTIVITY OCCURRING NEXT TO ANY SUCH SIGNS.
10. NOTIFY CITY INSPECTOR OF ALL FRANCHISE UTILITY OR PRIVATE INFRASTRUCTURE ISSUES AND COORDINATE WITH BOTH CITY AND FRANCHISE UTILITY OR PRIVATE INFRASTRUCTURE OWNER.
11. EXISTING MAILBOX LOCATIONS ARE EXPECTED TO CONFLICT WITH THIS PROJECT. IF EXISTING MAILBOX IS IN CONFLICT AND HAS NON-PERMANENT FOUNDATION, THEN CONTRACTOR IS TO CONTACT OWNER AND HAVE THEM RELOCATE MAILBOX. EXISTING MAILBOXES WITH PERMANENT FOUNDATIONS NOTED FOR REMOVAL IN THIS CONSTRUCTION DRAWING SET ARE TO BE REMOVED AND RELOCATED AS DIRECTED. IF EXISTING MAILBOX WITH PERMANENT FOUNDATION IS IN CONFLICT AND IS NOT NOTED FOR REMOVAL IN THIS CONSTRUCTION DRAWING SET, THEN CONTRACTOR IS TO NOTIFY PROJECT ENGINEER, WHO WILL THEN COORDINATE WITH MAILBOX OTHER BEFORE CONTRACTOR SETS A NEW, PERMANENT FOUNDATION AND OWNER RELOCATES MAILBOX.

PAVING NOTES:

A. ALL EXISTING BASE COURSE MATERIAL OR MATERIAL REMAINING AFTER EXCAVATION ARE TO BE PROOF ROLLED WITH MINIMUM TWENTY-FIVE (25) TON PNEUMATIC ROLLER PRIOR TO ANY PAVING ACTIVITY TAKING PLACE. EXCAVATE ANY SOFT MATERIAL AND SCARIFY EXCAVATED AREA PLUS SUFFICIENT DISTANCE BEYOND TO ENSURE PROPER MIXING AND BONDING.
B. ALL NEW PAVEMENT AND CONCRETE ARE TO BE PLACED CLEANLY AND FLUSH WITH ALL ADJACENT, EXISTING PAVEMENT OR CONCRETE INCLUDING CURBS.
C. PRIOR TO PAVING ACTIVITIES, APPLY PRIME COAT UNIFORMLY ON TOP OF ALL PREPARED FLEXIBLE BASE COURSE SURFACES. ADDITIONALLY, APPLY PRIME COAT TO ALL JOINTS, INCLUDING COLD JOINTS WITH MATS PREVIOUSLY LAID, AND JOINTS WITH CONCRETE WHERE ASPHALT PAVEMENT WILL ABUT CONCRETE PAVEMENT INCLUDING AT LIP OF CURB.
D. APPLY TACK COAT UNIFORMLY TO ALL INTERMEDIATE ASPHALT PAVEMENT COURSES WHOSE SURFACE IS SCHEDULED TO RECEIVE AN OVERLAYING COURSE OF ASPHALT PAVEMENT. ADDITIONALLY, APPLY TACK COAT TO ALL JOINTS, INCLUDING COLD JOINTS WITH MATS PREVIOUSLY LAID, AND JOINTS WITH CONCRETE WHERE ASPHALT PAVEMENT WILL ABUT CONCRETE PAVEMENT INCLUDING AT LIP OF CURB.
E. BLOT AREAS SHOWING AN EXCESS OF PRIME COAT OR TACK COAT WITH SAND OR OTHER SIMILAR MATERIAL AND REMOVE BLOTTING MATERIAL BEFORE PAVING.
F. LAY-DOWN OPERATIONS:
   a. IN ADDITION TO OTHER REQUIREMENTS SPECIFIED IN CITY OF MIDLAND SPECIFICATIONS, PROVIDE ASPHALT PAVERS THAT DO NOT SUPPORT WEIGHT OF ANY PORTION OF HAULING EQUIPMENT OTHER THAN CONNECTION.
   b. OFFSET JOINTS IN SURFACE COURSE FROM LANE LINES BY SIX INCHES (6"). WHEN CONSTRUCTING A JOINT BETWEEN LANES OF OPPOSING TRAFFIC, OFFSET JOINT BY SIX INCHES (6") INTO EITHER LANE.
G. MAINTAIN SUBGRADE OR BASE IN A SMOOTH, CLEAN, COMPACTED CONDITION AND KEEP DAMP WITH WATER UNTIL CONCRETE PAVEMENT IS PLACED.
H. PLACE CONCRETE PAVEMENT WITHIN 45 MINUTES OF BATCHING AND USE VIBRATORY EQUIPMENT TO CONSOLIDATE CONCRETE. DO NOT USE VIBRATORY EQUIPMENT TO DISTRIBUTE CONCRETE PAVEMENT. SEGREGATED CONCRETE IS SUBJECT TO REJECTION.
I. SAWCUT ALL CONTROL JOINTS. JOINT SPACING TO TYPICALLY BE MINIMUM 10' X 10' AND MAXIMUM 15' X 15'. PLAN JOINT LAYOUT AROUND CURB RETURNS AND OTHER IRREGULAR FEATURES SUCH THAT JOINTS ARE PERPENDICULAR TO CURBS OR CONCRETE EDGES.
J. WHEN PLACED ADJACENT TO CONCRETE PAVEMENT, CURB JOINT SPACING IS TO MATCH CONCRETE PAVEMENT SPACING. WHEN PLACED SEPARATELY FROM PAVEMENT, CURB JOINTS ARE TO BE SPACED NO CLOSER THAN 2.0' AND NO FURTHER THAN 10.0' APART.
K. CURB JOINTS ARE TO BE TOOL JOINTS EXCEPT FOR EVERY 6TH CONTROL JOINT, WHICH IS TO BE AN EXPANSION JOINT. UTILIZE EXPANSION JOINTS AT ALL JOINTS BETWEEN NEW AND EXISTING CURB-AND-GUTTER.
L. ALL CONCRETE PAVEMENT SURFACES ARE TO BE BROOM FINISHED.
M. MATCH EXISTING CURB HEIGHT THROUGHOUT ANYWHERE THAT NEW STAND-UP CURB IS SET ADJACENT TO EXISTING CURB.
N. ALL CONCRETE PAVEMENT JOINTS ARE TO BE SEALED IN COMPLIANCE WITH CITY OF MIDLAND STANDARDS. THIS REQUIREMENT DOES NOT APPLY TO PEDESTRIAN ACCESS RAMP, SIDEWALK, OR CURB JOINTS.
O. ONLY USE AND PLACE APPROVED EXPANSION JOINT MATERIAL AS INDICATED ON CONSTRUCTION DRAWINGS AND BETWEEN EXISTING CURB AND PROPOSED CURB.
P. CONCRETE FILLET ARE TO BE PLACE INTEGRAL WITH ADJACENT CONCRETE CURB.

DRAINAGE NOTES:

1. CONTRACTOR IS TO ENSURE POSITIVE SURFACE DRAINAGE THROUGHOUT PROJECT SITE WITH SPECIAL ATTENTION GIVEN TO SURFACE DRAINAGE AT ALL INTERSECTIONS.
2. CONTRACTOR IS TO CORRECT ANY SURFACE GRADES INSTALLED THAT RESULT IN WATER PONDING OR COLLECTING IN ANY LOCATION NOT INTENDED FOR COLLECTION, I.E. ANYWHERE THAT IS NOT A BASIN, POND, INLET. ETC. CONTRACTOR IS TO NOTIFY PROJECT ENGINEER IF WATER PONDING OR COLLECTING IS BELIEVED TO BE CAUSED BY DESIGN ERROR AND WAIT FOR DIRECTION FROM PROJECT ENGINEER BEFORE PROCEEDING WITH ANY FIELD CHANGES.

LEGEND

- FIRE HYDRANT
- WATER VALVE
- WATER METER
- IRRIGATION METER
- WASTEWATER MANHOLE
- STM — STORM DRAIN CULVERT
- STORM DRAIN MANHOLE
- GM — GAS METER
- FENCE LINE
- OHE — OVERHEAD LINE
- POWER POLE
- LIGHT POLE
- GUY WIRE
- SIGN
- MAILBOX
- T EB FVT EVT C — FRANCHISE UTILITY STRUCTURES
- BENCHMARK
- DITCH CENTERLINE
- DITCH DAYLIGHT EDGE

Know what's below. Call before you dig.

Description	Date	By

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022
Rev. No.

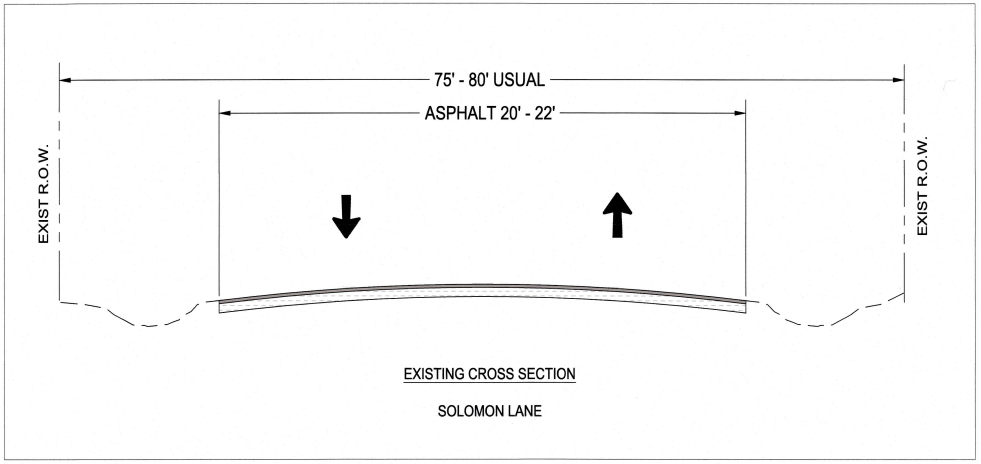
MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT

GENERAL NOTES

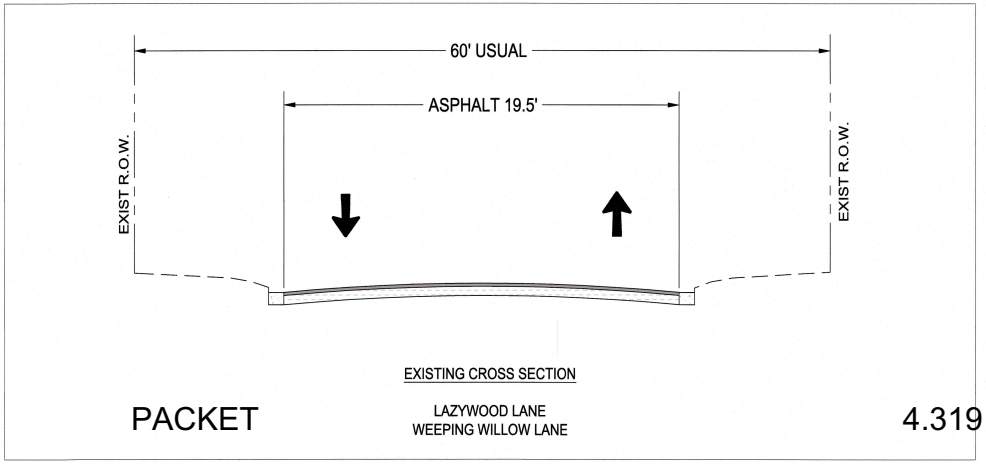
STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

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EXISTING CROSS SECTION

SOLOMON LANE



EXISTING CROSS SECTION

LAZYWOOD LANE
WEEPING WILLOW LANE

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

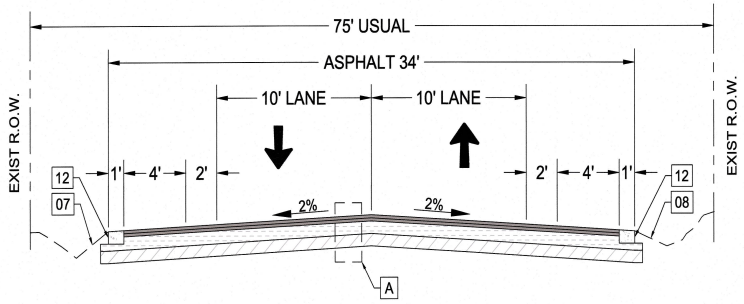
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APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT
TYPICAL SECTION
1 OF 4

STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED
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PROPOSED ASPHALT CROSS SECTION A-A
RD-A STA: 0+21.37 TO 5+98.13
RD-A STA: 6+57.61 TO 11+09.72
RD-A STA: 11+69.14 TO 13+45.71
RD-A STA: 16+96.71 TO 18+35.36
RD-A STA: 20+89.76 TO 48+24.75

NOTES:

A) ALL CONCRETE PAVEMENT IS TO BE CITY OF MIDLAND CLASS "C", 3600 PSI, WITH FIBER REINFORCEMENT THROUGHOUT UNLESS SPECIFICALLY NOTED OTHERWISE.

KEYED NOTES:

01 2" TYPE D HMAC PAVEMENT

02 TACK COAT

03 2" TYPE C HMAC PAVEMENT

04 PRIME COAT

05 8" FLEXIBLE COMPACTED BASE (98% COMPACTED MAXIMUM DRY DENSITY)

06 8" COMPACTED SUBGRADE (95% COMPACTED MAXIMUM DRY DENSITY

07 4:1 TO 10:1 DOWNSLOPE FOR 7.0'GRADE TO DAYLIGHT FOR STABILIZE SURFACE

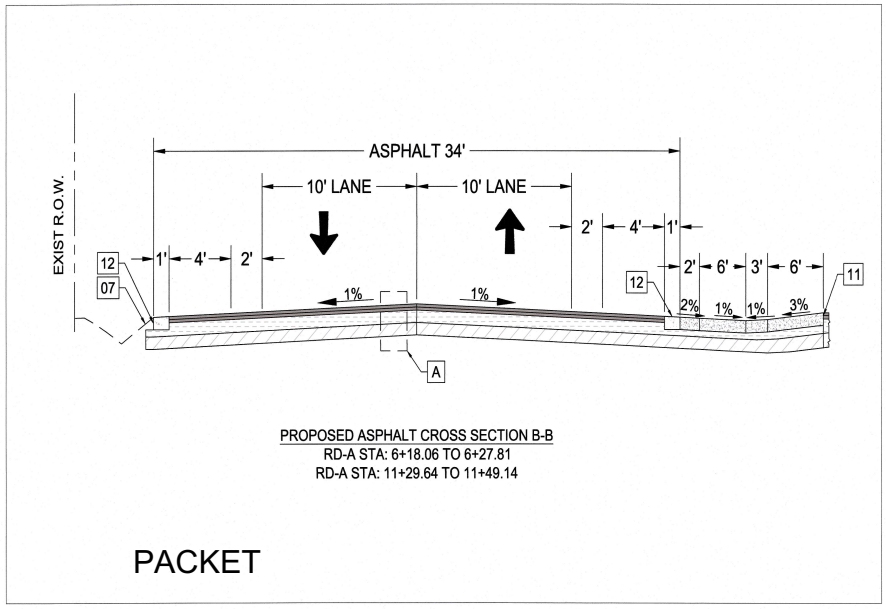
08 4:1 TO 10:1 DOWNSLOPE FOR 8.0'GRADE TO DAYLIGHT FOR STABILIZE SURFACE

09 7" REBAR & FIBER REINFORCED CONCRETE PAVEMENT

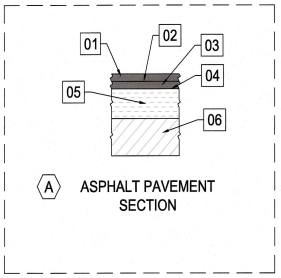
10 6" FLEXIBLE COMPACTED BASE (98% COMPACTED MAXIMUM DRY DENSITY)

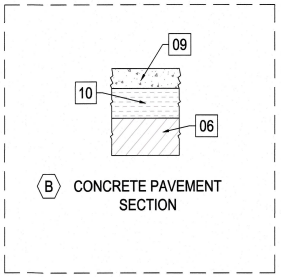
11 6" FIBER REINFORCED CONCRETE VALLEY GUTTER

12 8" FIBER REINFORCED CONCRETE RIBBON CURB



PROPOSED ASPHALT CROSS SECTION B-B
RD-A STA: 6+18.06 TO 6+27.81
RD-A STA: 11+29.64 TO 11+49.14





Know what's below. Call before you dig.

No.	Description	By	Date

DRAWN/DESIGNED: PAK
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APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022

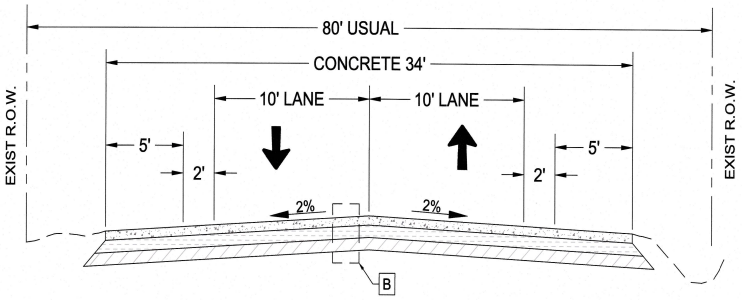
MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT
TYPICAL SECTION
2 OF 4

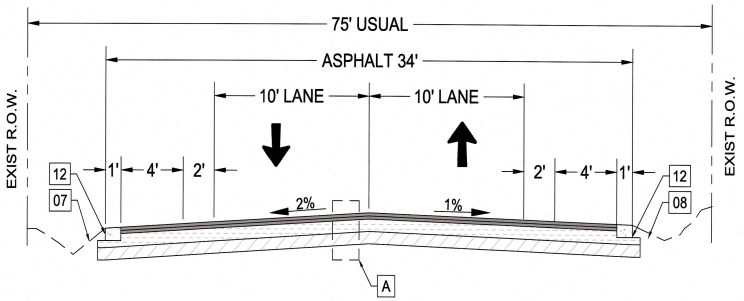
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31 2022

4
OF 64

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PROPOSED CONCRETE CROSS SECTION C-C
RD-A STA: 13+45.71 TO 16+96.71



PROPOSED ASPHALT CROSS SECTION D-D
RD-A STA: 18+60.36 to 20+64.76

NOTES:

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06 8" COMPACTED SUBGRADE (95% COMPACTED MAXIMUM DRY DENSITY

07 4:1 TO 10:1 DOWNSLOPE FOR 7.0'GRADE TO DAYLIGHT FOR STABILIZE SURFACE

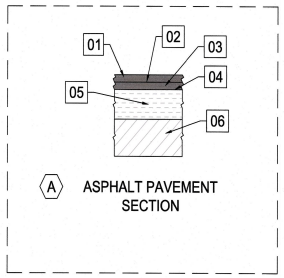
08 4:1 TO 10:1 DOWNSLOPE FOR 8.0'GRADE TO DAYLIGHT FOR STABILIZE SURFACE

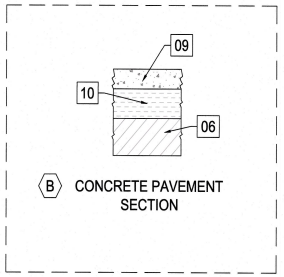
09 7" REBAR & FIBER REINFORCED CONCRETE PAVEMENT

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11 6" FIBER REINFORCED CONCRETE VALLEY GUTTER

12 8" FIBER REINFORCED CONCRETE RIBBON CURB





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APPROVED: JCF
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HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022
Rev. No.

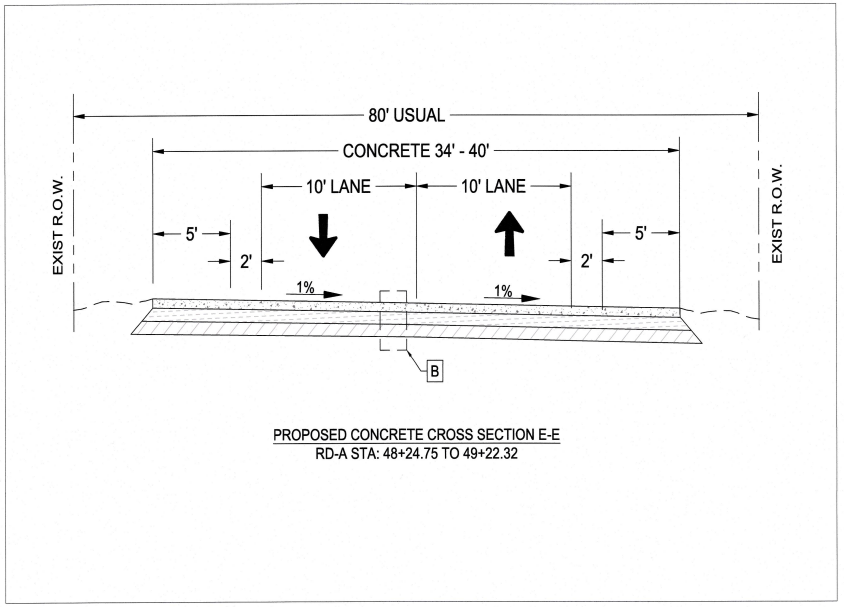
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SOLOMON LANE PAVING BOND PROJECT
TYPICAL SECTION
3 OF 4

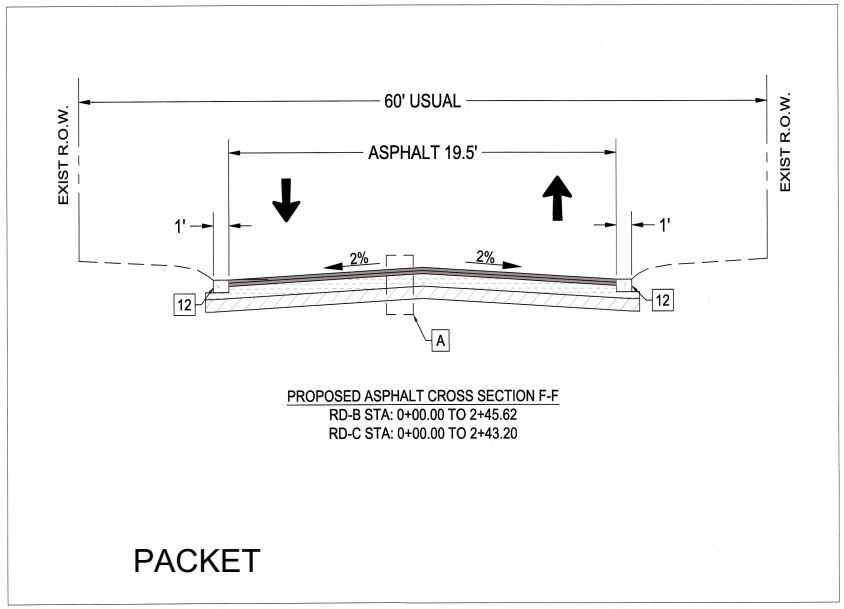
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
05/31/22

5
OF 64

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PROPOSED CONCRETE CROSS SECTION E-E
RD-A STA: 48+24.75 TO 49+22.32



PROPOSED ASPHALT CROSS SECTION F-F
RD-B STA: 0+00.00 TO 2+45.62
RD-C STA: 0+00.00 TO 2+43.20

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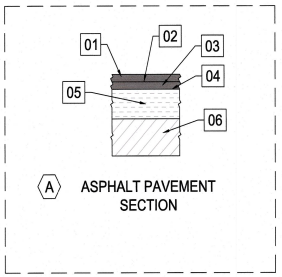
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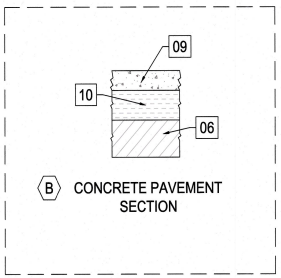
10 6" FLEXIBLE COMPACTED BASE (98% COMPACTED MAXIMUM DRY DENSITY)

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A ASPHALT PAVEMENT SECTION



B CONCRETE PAVEMENT SECTION

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Rev. No.	Date	By	Description

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APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022

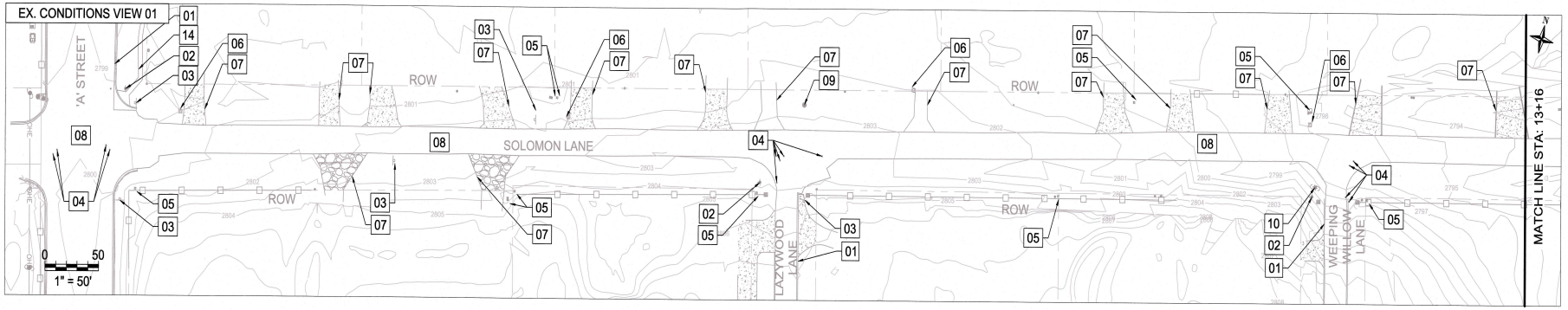
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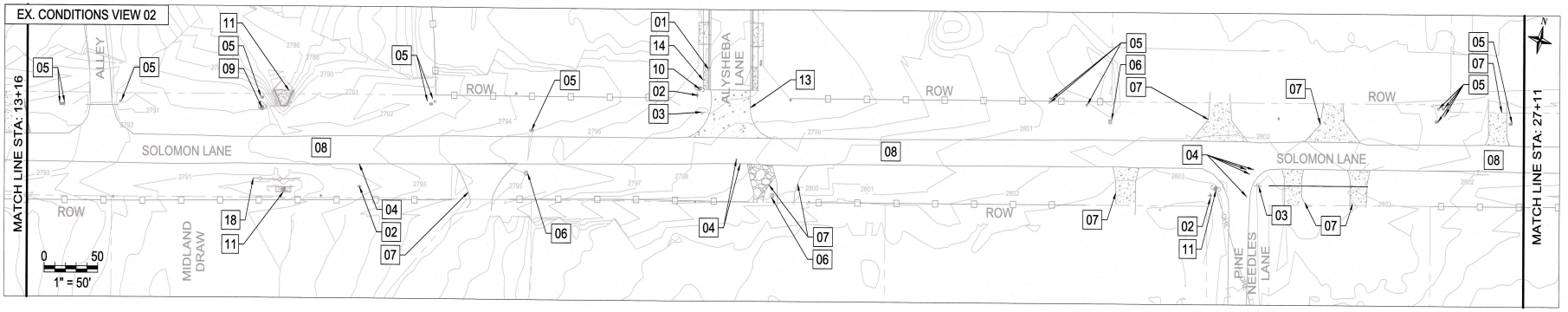
SOLOMON LANE PAVING BOND PROJECT
TYPICAL SECTION
4 OF 4

STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

6
OF 64

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EXISTING CONDITION NOTES:

A) EXISTING CONDITIONS SHOWN ARE BASED ON AVAILABLE PREVIOUS DESIGN DRAWINGS, CITY OF MIDLAND GIS DATA, CITY OF MIDLAND LIDAR CONTOUR DATA, SPOT SURVEY DATA, AND SITE VISITS. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

B) EXISTING GAS, WATER, WASTEWATER, COMMUNICATION AND ELECTRIC LINES WERE LOCATED FROM ONE-CALL MARKERS AND ONSITE FIELD VISITS, CONTRACTOR IS TO TAKE ALL NECESSARY STEPS AND PRECAUTIONS TO ENSURE THE SAFETY OF BOTH PUBLIC AND CONTRACTOR'S WORKERS WHEN EXCAVATION IS TAKING PLACE NEAR THESE LINES.

C) CONTRACTOR IS TO TAKE ALL NECESSARY STEPS AND PRECAUTIONS TO ENSURE SAFETY OF BOTH PUBLIC AND CONTRACTOR'S WORKERS WHEN ANY TRENCHING OR OTHER WORK IS TAKING PLACE NEAR OVERHEAD ELECTRIC, POWER, OR PHONE LINES.

D) EXISTING TREES NEAR PROJECT SITE NOT NOTED FOR REMOVAL IN THIS CONSTRUCTION DRAWING SET SHOULD NOT BE CLOSE ENOUGH TO INTERFERE WITH CONSTRUCTION ACTIVITIES, AND CONTRACTOR IS DIRECTED TO MAKE SURE THESE EXISTING TREES ARE NOT DAMAGED DURING PROJECT OPERATIONS. CONTRACTOR IS TO NOTIFY ENGINEER OF ANY ISSUES OR CONFLICTS WITH THESE EXISTING TREES AND WAIT FOR DIRECTION FROM ENGINEER PRIOR TO PERFORMING ANY ACTIVITY THAT MIGHT HARM THESE TREES.

EXISTING CONDITIONS KEYED NOTES:

01 EXISTING CURB & GUTTER
02 EXISTING FIRE HYDRANT
03 EXISTING STREET SIGN
04 EXISTING WATER VALVE COVER
05 EXISTING FRANCHISE UTILITY STRUCTURES
06 EXISTING MAILBOX
07 EXISTING DRIVEWAY
08 EXISTING ASPHALT PAVEMENT
09 EXISTING WASTEWATER MANHOLE
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14 EXISTING SIDEWALK
15 EXISTING UTILITY POWER POLE TO REMAIN
16 EXISTING CONCRETE PAVEMENT
17 EXISTING UTILITY GUY WIRE TO REMAIN
18 EXISTING GUARDRAIL

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
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VERT. SCALE:
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PROJECT NO.: BPU19-05
DATE: MAY 2022

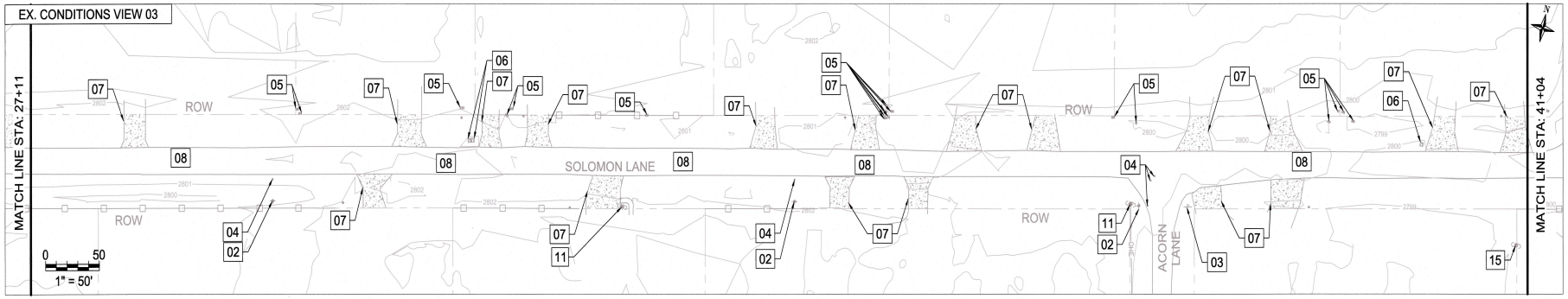
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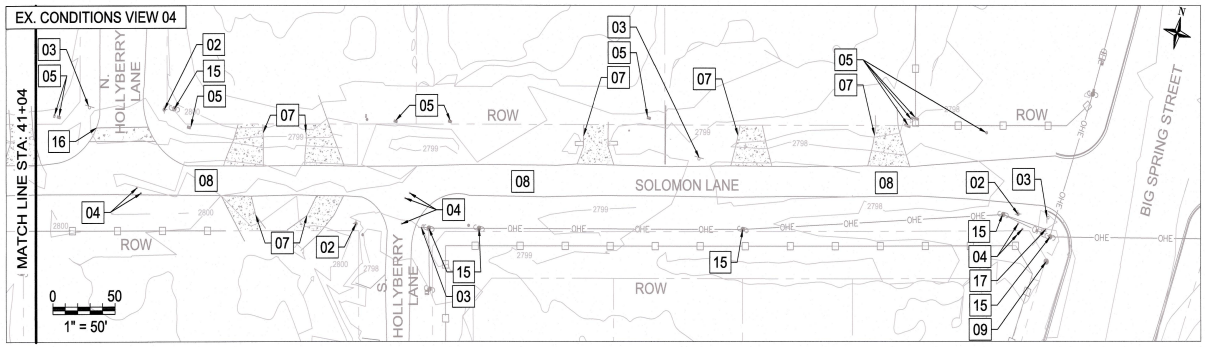
SOLOMON LANE PAVING BOND PROJECT
EXISTING CONDITIONS 1 OF 3

STATE OF TEXAS
MAY 24 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

7
OF 64

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EXISTING CONDITION NOTES:

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Know what's below. Call before you dig.

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VERT. SCALE:
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

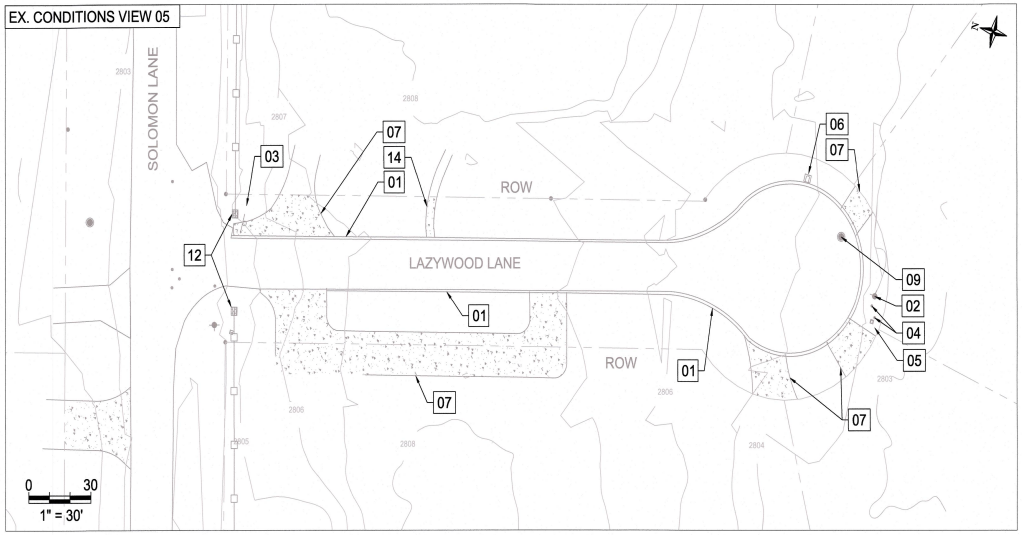
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SOLOMON LANE PAVING
BOND PROJECT
EXISTING CONDITIONS
2 OF 3

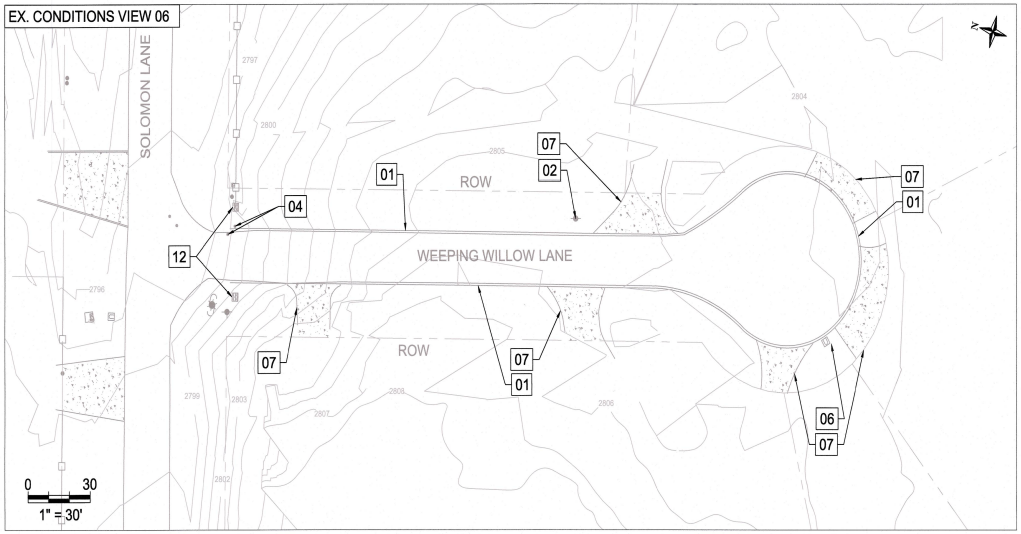
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JOSHUA C. FERGUSON
117692
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PROFESSIONAL ENGINEER
MAY 31, 2022

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EX. CONDITIONS VIEW 05



EX. CONDITIONS VIEW 06



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16 EXISTING CONCRETE PAVEMENT
17 EXISTING UTILITY GUY WIRE TO REMAIN
18 EXISTING GUARDRAIL

811 Know what's below. Call before you dig.

Description	Date	By

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:30
PROJECT NO.: BPU19-05
DATE: MAY 2022
Rev. No.

MIDLAND Engineering Services

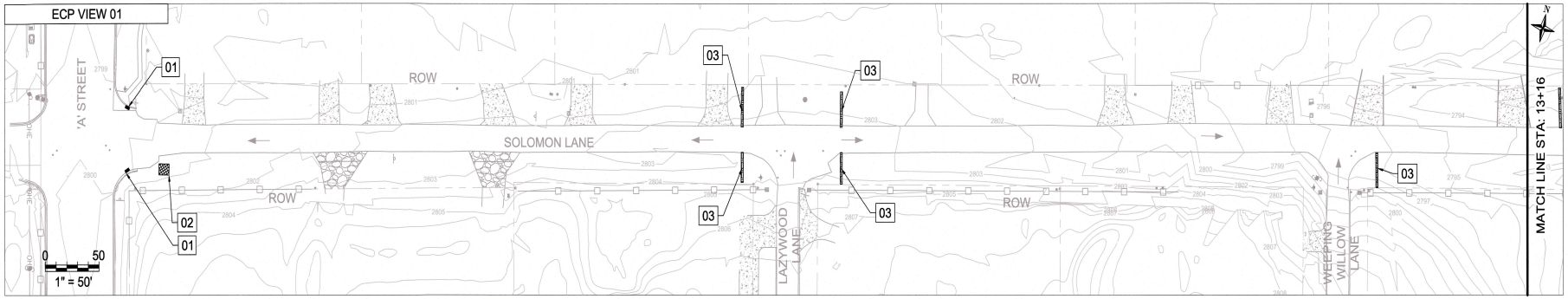
SOLOMON LANE PAVING
BOND PROJECT

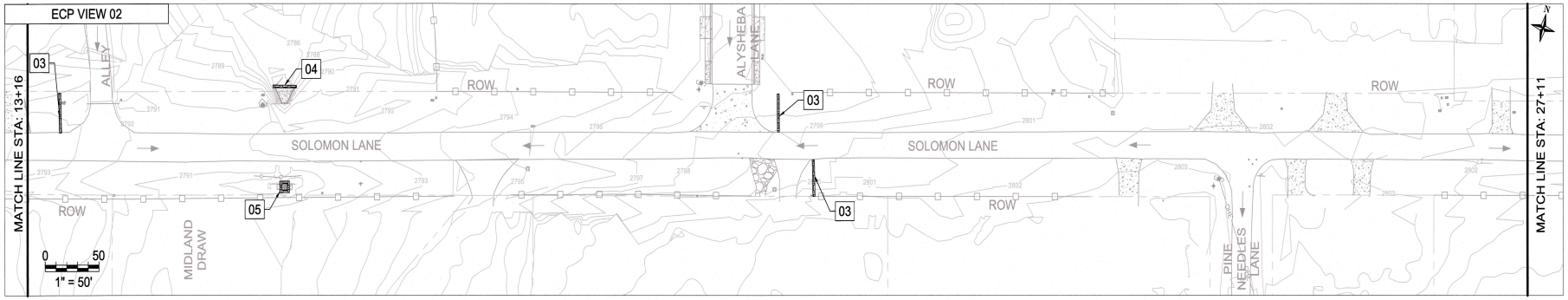
EXISTING CONDITIONS
3 OF 3

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31 2022

9
OF 64

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EROSION CONTROL NOTES:

A) INSTALL EROSION CONTROL MEASURES PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY ON PROJECT SITE.

B) CONTRACTOR IS TO MAINTAIN EROSION CONTROL MEASURES AT ALL TIMES. REPAIRS TO EXISTING EROSION CONTROL MEASURES ARE TO BE MADE IMMEDIATELY UPON DISCOVERY THAT SUCH REPAIRS ARE NEEDED. ALL EROSION CONTROL MEASURES AT THE PROJECT SITE ARE TO BE INSPECTED IMMEDIATELY FOLLOWING ANY STORM EVENT.

C) ANY ON-SITE STORAGE OF SPOILS, MATERIALS, OR EQUIPMENT ARE TO BE LOCATED WITHIN EXISTING SOLOMON LANE RIGHT-OF-WAY DESIGNATED AS PART OF WORK ZONE AREA. THERE IS TO BE NO MATERIAL OR EQUIPMENT STORAGE WITHIN LAZYWOOD LANE OR WEEPING WILLOW LANE RIGHT-OR-WAYS , NOR IN MIDLAND DRAW.

D) CONTRACTOR IS TO MAINTAIN A REASONABLY CLEAN PROJECT SITE AT ALL TIMES. ANY SEDIMENT, DEBRIS, ETC. OUTSIDE THE PROJECT SITE ARE TO BE REMOVED PROMPTLY.

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EROSION CONTROL KEYED NOTES:

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04 PLACE FILTER SOCKS IN FRONT OF THE STORM DRAIN HEADWALL.

05 PLACE FILTER SOCKS AROUND THE STORM DRAIN INLET PER DETAIL D03, SHEET 59.

06 PLACE FILTER SOCKS ALONG OUTER CURB PERIMETER OF LAZYWOOD LANE AND WEEPING WILLOW LANE AS SHOWN.

811 Know what's below. Call before you dig.

No.	Description	By	Date

DRAWN/DESIGNED: PAK
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VERT. SCALE:
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

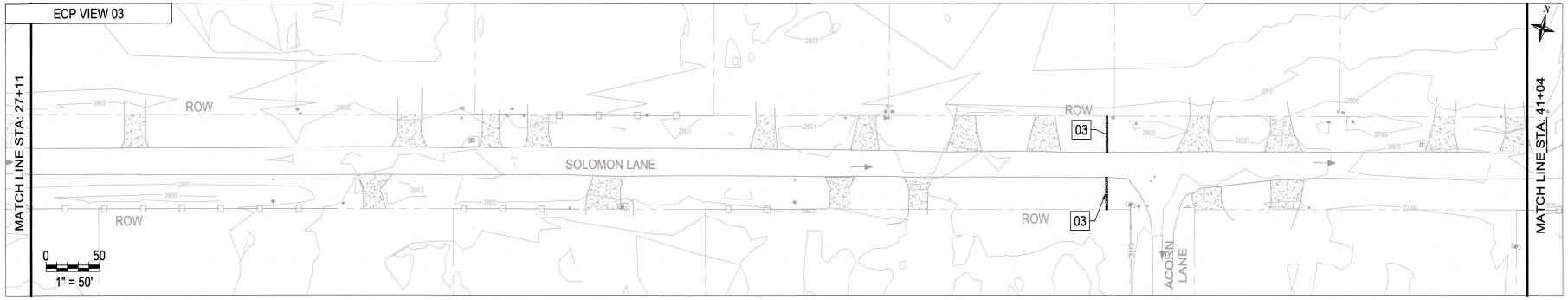
MIDLAND Engineering Services

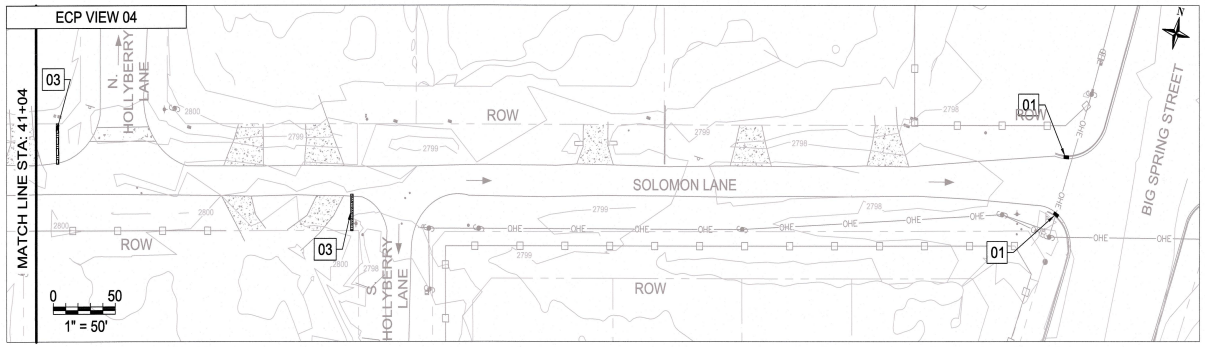
SOLOMON LANE PAVING BOND PROJECT

EROSION CONTROL PLAN 1 OF 3

STATE OF TEXAS
MAY 31, 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

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MIDLAND Engineering Services

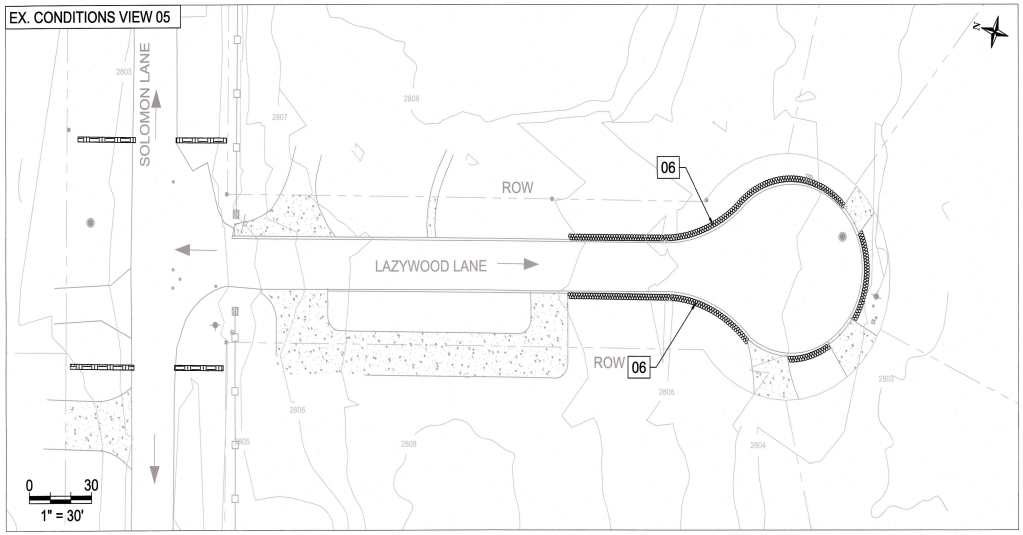
SOLOMON LANE PAVING BOND PROJECT

EROSION CONTROL PLAN 2 OF 3

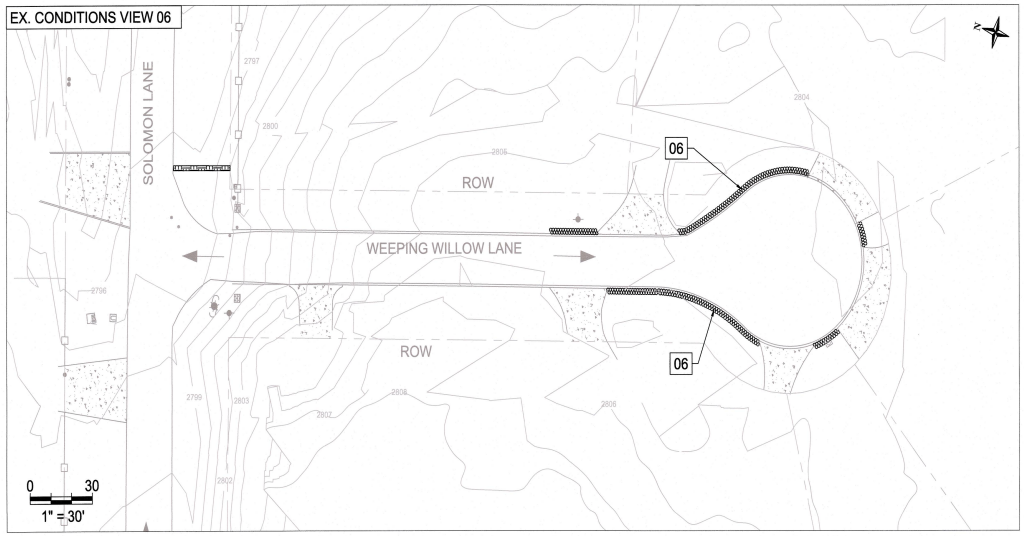
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31, 2022

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EX. CONDITIONS VIEW 05



EX. CONDITIONS VIEW 06



EROSION CONTROL NOTES:

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05 PLACE FILTER SOCKS AROUND THE STORM DRAIN INLET PER DETAIL D03, SHEET 59.

06 PLACE FILTER SOCKS ALONG OUTER CURB PERIMETER OF LAZYWOOD LANE AND WEEPING WILLOW LANE AS SHOWN.

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MIDLAND Engineering Services

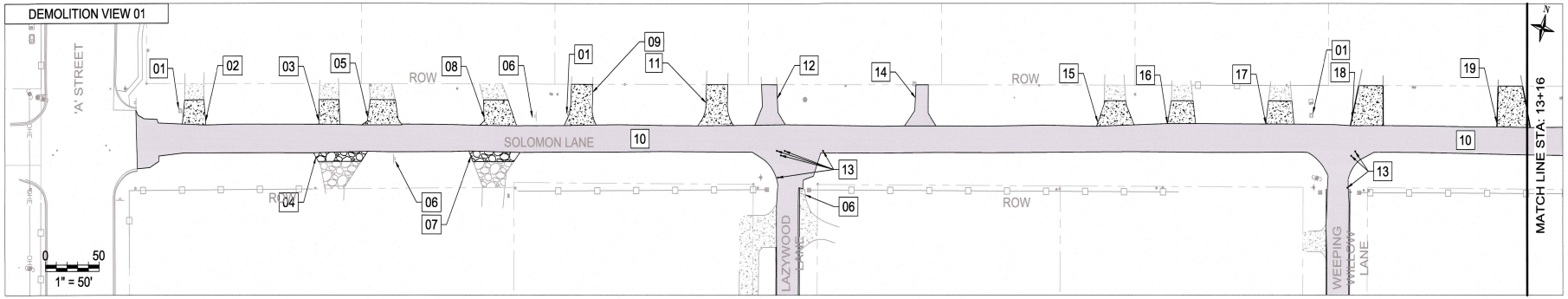
SOLOMON LANE PAVING BOND PROJECT

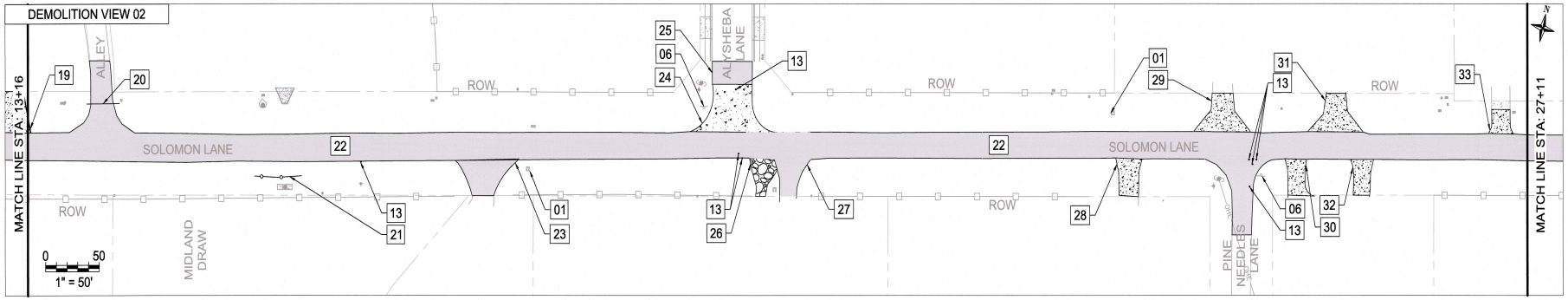
EROSION CONTROL PLAN 3 OF 3

STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

12
OF 64

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DEMOLITION NOTES:

A) ALL DEMOLITION INFORMATION IS BASED ON MOST RELIABLE DATA AVAILABLE. CONTRACTOR IS TO FIELD VERIFY ACTUAL DIMENSIONS, LOCATIONS, SIZES, ETC. AND NOTIFY ENGINEER OF ANY QUANTITY INCREASES OR DISCREPANCIES.

B) ALL SAW-CUTS FOR PAVEMENT REMOVAL ARE TO BE CUT IN CLEAN, STRAIGHT LINES.

C) NO EXISTING INFRASTRUCTURE IS TO BE REMOVED THAT IS NOT NOTED FOR REMOVAL ON THIS SHEET WITHOUT WRITTEN CONFIRMATION FROM ENGINEER PRIOR TO SUCH REMOVAL TAKING PLACE. ANY EXISTING INFRASTRUCTURE DAMAGED OR REMOVED BY CONTRACTOR THAT IS NOT NOTED ON THIS SHEET MUST BE REPAIRED OR REPLACED TO EQUAL OR BETTER CONDITION AT CONTRACTOR'S SOLE EXPENSE.

D) NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES BEFORE REMOVING ANYTHING NOT NOTED FOR REMOVAL.

E) ALL EXISTING VERTICAL STRUCTURES SUCH AS POWER POLES, TREES, ETC. ARE TO REMAIN UNLESS OTHERWISE NOTED.

F) IF TRAFFIC SIGNS ARE IN CONFLICT NOTIFY CITY TRAFFIC ENGINEER TO COORDINATE REMOVAL OR RELOCATION BY CITY.

G) CONTRACTOR CANNOT REMOVE EXISTING MAILBOXES OR SET NEW MAILBOXES. EXISTING MAILBOXES CAN ONLY BE REMOVED BY MAILBOX OWNERS, AND NEW MAILBOXES CAN ONLY BE SET BY MAILBOX OWNERS. CONTRACTOR CAN REMOVE MAILBOX FOUNDATIONS ONCE MAILBOXES HAVE BEEN REMOVED, AND CAN SET NEW FOUNDATIONS FOR MAILBOXES TO BE SET ON.

DEMOLITION KEYED NOTES:

01 CONTRACTOR TO REMOVE EXISTING MAILBOX FOUNDATION ONLY AFTER MAILBOX HAS BEEN REMOVED. CONTRACTOR TO SET NEW MAILBOX FOUNDATION AT LOCATION INDICATED BY PROPERTY OWNER WITHIN RIGHT-OF-WAY.

02 REMOVE APPROXIMATELY 42.1-SY EXISTING DRIVEWAY PAVEMENT.

03 REMOVE APPROXIMATELY 41.0-SY EXISTING DRIVEWAY PAVEMENT.

04 REMOVE APPROXIMATELY 36.5-SY EXISTING UNPAVED DRIVEWAY MATERIAL.

05 REMOVE APPROXIMATELY 59.8-SY EXISTING DRIVEWAY PAVEMENT.

06 REMOVE AND SALVAGE STREET SIGNS.

07 REMOVE APPROXIMATELY 36.3-SY EXISTING UNPAVED DRIVEWAY MATERIAL.

08 REMOVE APPROXIMATELY 59.2-SY EXISTING DRIVEWAY PAVEMENT.

09 REMOVE APPROXIMATELY 76.5-SY EXISTING DRIVEWAY PAVEMENT.

10 REMOVE APPROXIMATELY 3433.0-SY EXISTING PAVEMENT.

11 REMOVE APPROXIMATELY 78.9-SY EXISTING DRIVEWAY PAVEMENT.

12 REMOVE APPROXIMATELY 59.5-SY EXISTING DRIVEWAY PAVEMENT.

13 EXISTING WATER VALVE CONCRETE RING TO BE REMOVED. COVER TO BE ADJUSTED TO FINISH GRADE.

14 REMOVE APPROXIMATELY 53.5-SY EXISTING DRIVEWAY PAVEMENT.

15 REMOVE APPROXIMATELY 57.1-SY EXISTING DRIVEWAY PAVEMENT.

16 REMOVE APPROXIMATELY 45.9-SY EXISTING DRIVEWAY PAVEMENT.

17 REMOVE APPROXIMATELY 48.0-SY EXISTING DRIVEWAY PAVEMENT.

18 REMOVE APPROXIMATELY 90.2-SY EXISTING DRIVEWAY PAVEMENT.

19 REMOVE APPROXIMATELY 93.8-SY EXISTING DRIVEWAY PAVEMENT.

20 REMOVE EXISTING STORM CULVERT APPROXIMATELY 30.0-LF.

21 REMOVE AND REPLACE APPROXIMATELY 45-LF EXISTING GUARDRAIL TXDOT DETAILS, SHEET 59.

22 REMOVE APPROXIMATELY 3622.6-SY EXISTING PAVEMENT.

23 REMOVE APPROXIMATELY 110.4-SY EXISTING DRIVEWAY PAVEMENT.

24 REMOVE APPROXIMATELY 181.4-SY EXISTING CONCRETE FILLET AND VALLEY GUTTER.

25 REMOVE APPROXIMATELY 73.5-SY EXISTING PAVEMENT.

26 REMOVE APPROXIMATELY 73.6-SY EXISTING UNPAVED DRIVEWAY MATERIAL.

27 REMOVE APPROXIMATELY 68.3-SY EXISTING DRIVEWAY PAVEMENT.

28 REMOVE APPROXIMATELY 63.5-SY EXISTING DRIVEWAY PAVEMENT.

29 REMOVE APPROXIMATELY 99.6-SY EXISTING DRIVEWAY PAVEMENT.

30 REMOVE APPROXIMATELY 52.3-SY EXISTING DRIVEWAY PAVEMENT.

31 REMOVE APPROXIMATELY 95.5-SY EXISTING DRIVEWAY PAVEMENT.

32 REMOVE APPROXIMATELY 51.0-SY EXISTING DRIVEWAY PAVEMENT.

33 REMOVE APPROXIMATELY 38.0-SY EXISTING DRIVEWAY PAVEMENT.

PACKET

August 9, 2022

Know what's below. Call before you dig.

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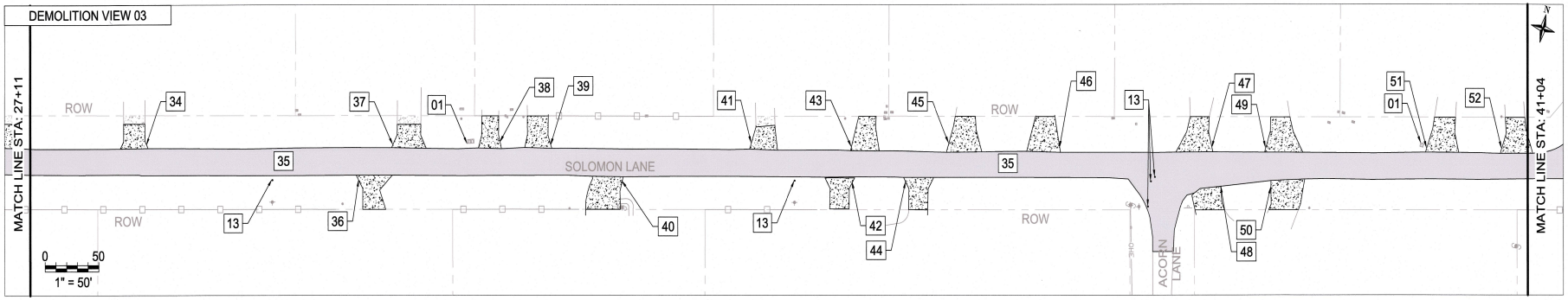
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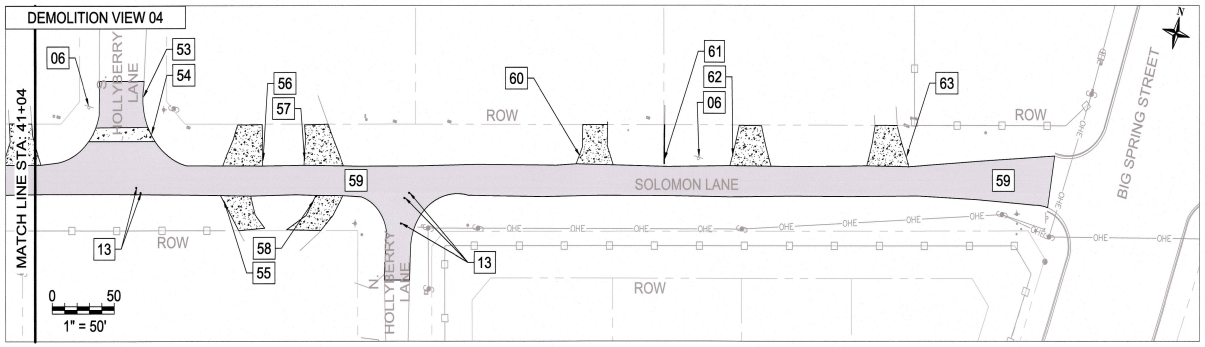
SOLOMON LANE PAVING
BOND PROJECT
DEMOLITION PLAN
1 OF 3

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
MAY 31, 2022

13
OF 64

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13 EXISTING WATER VALVE CONCRETE RING TO BE REMOVED. COVER TO BE ADJUSTED TO FINISH GRADE.

34 REMOVE APPROXIMATELY 44.6-SY EXISTING DRIVEWAY PAVEMENT.

35 REMOVE APPROXIMATELY 3474.6-SY EXISTING PAVEMENT.

36 REMOVE APPROXIMATELY 62.0-SY EXISTING DRIVEWAY PAVEMENT.

37 REMOVE APPROXIMATELY 50.7-SY EXISTING DRIVEWAY PAVEMENT.

38 REMOVE APPROXIMATELY 47.6-SY EXISTING DRIVEWAY PAVEMENT.

39 REMOVE APPROXIMATELY 57.1-SY EXISTING DRIVEWAY PAVEMENT.

40 REMOVE APPROXIMATELY 87.1-SY EXISTING DRIVEWAY PAVEMENT.

41 REMOVE APPROXIMATELY 45.6-SY EXISTING DRIVEWAY PAVEMENT.

42 REMOVE APPROXIMATELY 52.7-SY EXISTING DRIVEWAY PAVEMENT.

43 REMOVE APPROXIMATELY 62.2-SY EXISTING DRIVEWAY PAVEMENT.

44 REMOVE APPROXIMATELY 54.9-SY EXISTING DRIVEWAY PAVEMENT.

45 REMOVE APPROXIMATELY 76.7-SY EXISTING DRIVEWAY PAVEMENT.

46 REMOVE APPROXIMATELY 75.7-SY EXISTING DRIVEWAY PAVEMENT.

47 REMOVE APPROXIMATELY 72.8-SY EXISTING DRIVEWAY PAVEMENT.

48 REMOVE APPROXIMATELY 49.3-SY EXISTING DRIVEWAY PAVEMENT.

49 REMOVE APPROXIMATELY 61.9-SY EXISTING DRIVEWAY PAVEMENT.

50 REMOVE APPROXIMATELY 74.6-SY EXISTING DRIVEWAY PAVEMENT.

51 REMOVE APPROXIMATELY 71.6-SY EXISTING DRIVEWAY PAVEMENT.

52 REMOVE APPROXIMATELY 68.4-SY EXISTING DRIVEWAY PAVEMENT.

53 REMOVE APPROXIMATELY 125.3-SY EXISTING PAVEMENT.

54 REMOVE APPROXIMATELY 49.6-SY EXISTING CONCRETE PAVEMENT.

55 REMOVE APPROXIMATELY 54.2-SY EXISTING DRIVEWAY PAVEMENT.

56 REMOVE APPROXIMATELY 80.1-SY EXISTING DRIVEWAY PAVEMENT.

57 REMOVE APPROXIMATELY 77.1-SY EXISTING DRIVEWAY PAVEMENT.

58 REMOVE APPROXIMATELY 59.6-SY EXISTING DRIVEWAY PAVEMENT.

59 REMOVE APPROXIMATELY 2197.8-SY EXISTING PAVEMENT.

60 REMOVE APPROXIMATELY 66.0-SY EXISTING DRIVEWAY PAVEMENT.

61 REMOVE APPROXIMATELY 2.0-SY EXISTING CONCRETE PAVEMENT.

62 REMOVE APPROXIMATELY 76.1-SY EXISTING DRIVEWAY PAVEMENT.

63 REMOVE APPROXIMATELY 77.3-SY EXISTING DRIVEWAY PAVEMENT.

PACKET 4.330 August 9, 2022

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

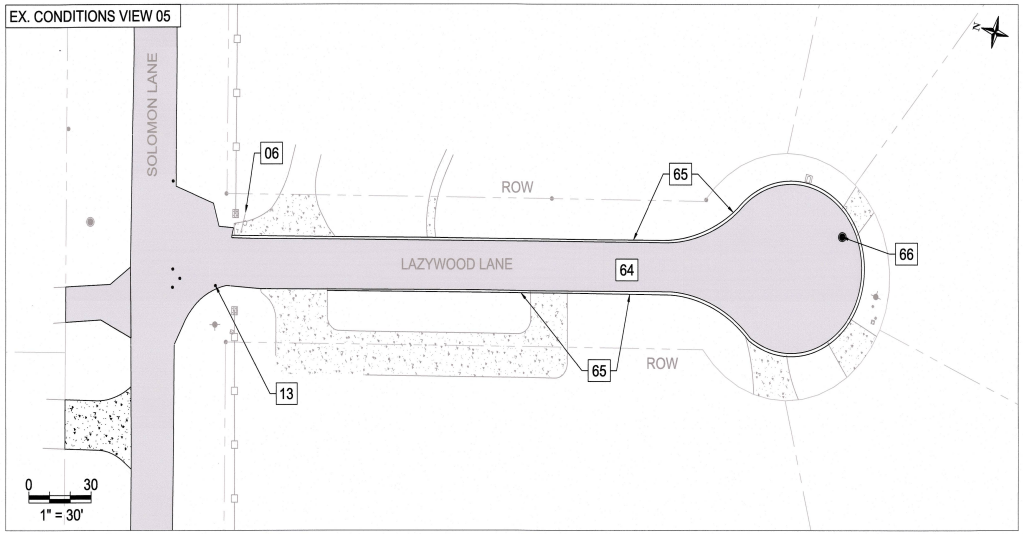
MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT
DEMOLITION PLAN
2 OF 3

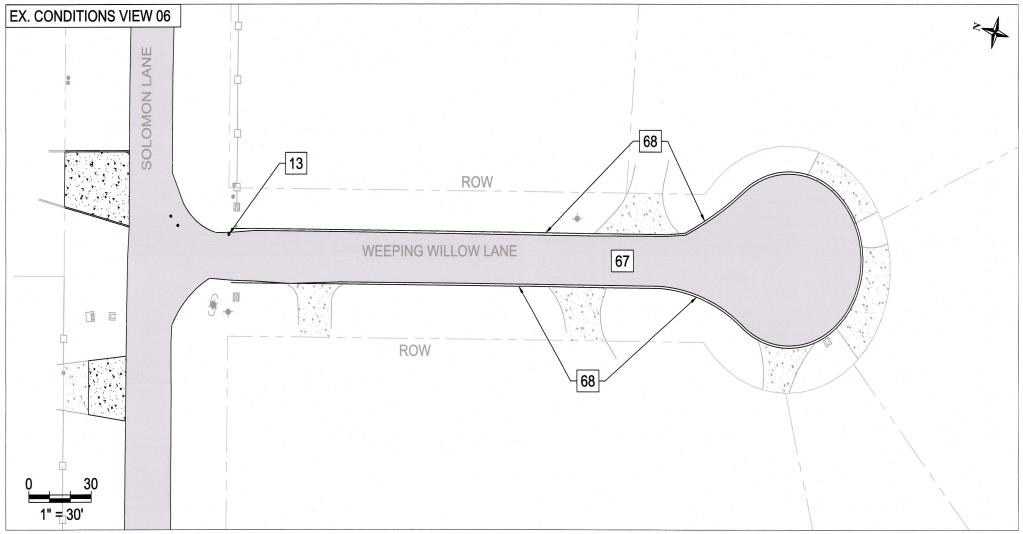
STATE OF TEXAS
MAY 31, 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

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EX. CONDITIONS VIEW 05



EX. CONDITIONS VIEW 06



DEMOLITION NOTES:

A) ALL DEMOLITION INFORMATION IS BASED ON MOST RELIABLE DATA AVAILABLE. CONTRACTOR IS TO FIELD VERIFY ACTUAL DIMENSIONS, LOCATIONS, SIZES, ETC. AND NOTIFY ENGINEER OF ANY QUANTITY INCREASES OR DISCREPANCIES.

B) ALL SAW-CUTS FOR PAVEMENT REMOVAL ARE TO BE CUT IN CLEAN, STRAIGHT LINES.

C) NO EXISTING INFRASTRUCTURE IS TO BE REMOVED THAT IS NOT NOTED FOR REMOVAL ON THIS SHEET WITHOUT WRITTEN CONFIRMATION FROM ENGINEER PRIOR TO SUCH REMOVAL TAKING PLACE. ANY EXISTING INFRASTRUCTURE DAMAGED OR REMOVED BY CONTRACTOR THAT IS NOT NOTED ON THIS SHEET MUST BE REPAIRED OR REPLACED TO EQUAL OR BETTER CONDITION AT CONTRACTOR'S SOLE EXPENSE.

D) NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES BEFORE REMOVING ANYTHING NOT NOTED FOR REMOVAL.

E) ALL EXISTING VERTICAL STRUCTURES SUCH AS POWER POLES, TREES, ETC. ARE TO REMAIN UNLESS OTHERWISE NOTED.

F) IF TRAFFIC SIGNS ARE IN CONFLICT NOTIFY CITY TRAFFIC ENGINEER TO COORDINATE REMOVAL OR RELOCATION BY CITY.

G) CONTRACTOR CANNOT REMOVE EXISTING MAILBOXES OR SET NEW MAILBOXES. EXISTING MAILBOXES CAN ONLY BE REMOVED BY MAILBOX OWNERS, AND NEW MAILBOXES CAN ONLY BE SET BY MAILBOX OWNERS. CONTRACTOR CAN REMOVE MAILBOX FOUNDATIONS ONCE MAILBOXES HAVE BEEN REMOVED, AND CAN SET NEW FOUNDATIONS FOR MAILBOXES TO BE SET ON.

DEMOLITION KEYED NOTES:

01 CONTRACTOR TO REMOVE EXISTING MAILBOX FOUNDATION ONLY AFTER MAILBOX HAS BEEN REMOVED. CONTRACTOR TO SET NEW MAILBOX FOUNDATION AT LOCATION INDICATED BY PROPERTY OWNER WITHIN RIGHT-OF-WAY.

06 REMOVE AND SALVAGE STREET SIGNS.

13 EXISTING WATER VALVE CONCRETE RING TO BE REMOVED. COVER TO BE ADJUSTED TO FINISH GRADE.

64 REMOVE APPROXIMATELY 955.0-SY EXISTING PAVEMENT.

65 REMOVE APPROXIMATELY 618.7-LF EXISTING RIBBON CURB.

66 EXISTING WASTEWATER MANHOLE CONCRETE RING TO BE REMOVED. COVER TO BE ADJUSTED TO FINISH GRADE.

67 REMOVE APPROXIMATELY 1003.5-SY EXISTING PAVEMENT.

68 REMOVE APPROXIMATELY 663.7-LF EXISTING RIBBON CURB.

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:30
PROJECT NO.: BPU19-05
DATE: MAY 2022

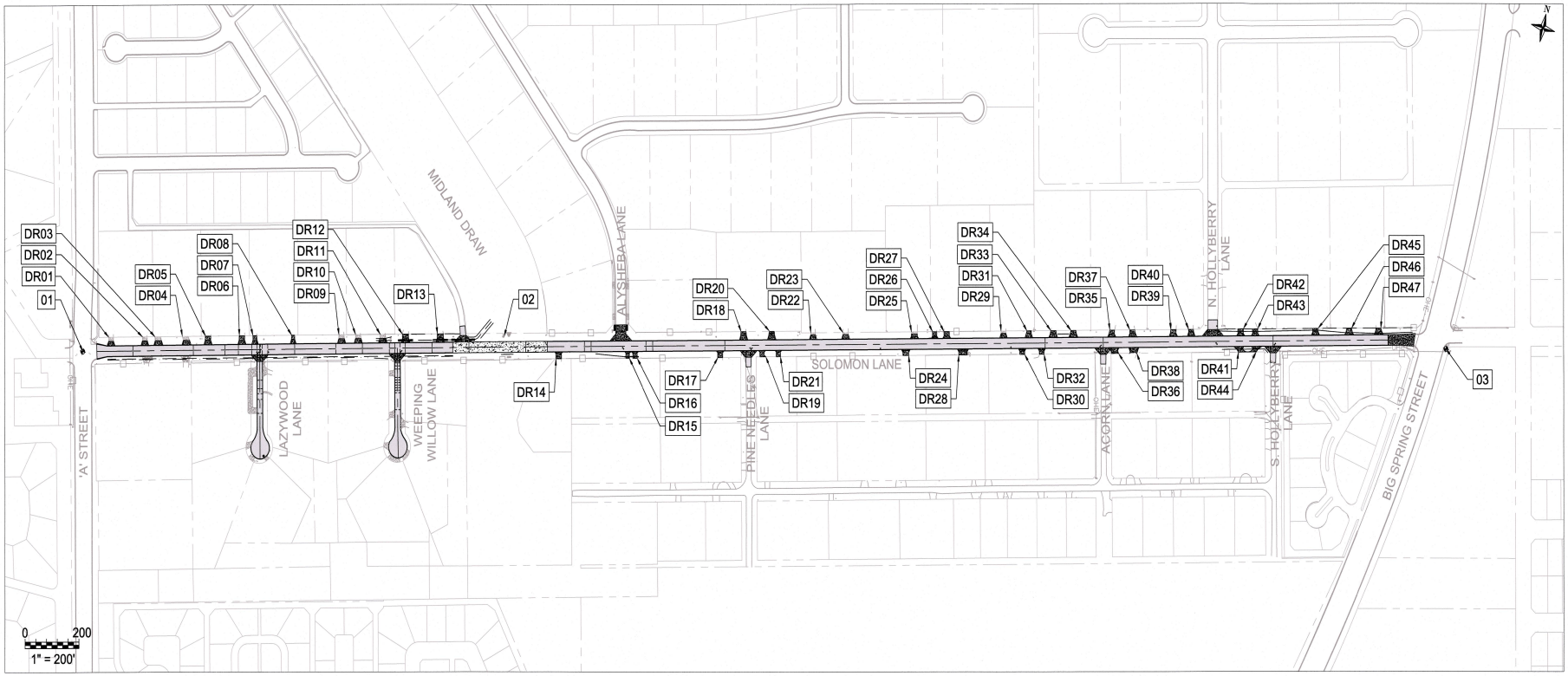
MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT
DEMOLITION PLAN
3 OF 3

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
MAY 31, 2022

15
OF 64

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GRID & BEARING NOTES:

1) BEARINGS, DISTANCES & COORDINATES SHOWN HEREON ARE NAD83, LAMBERT GRID COORDINATES REFERENCE TO TEXAS STATE COORDINATE SYSTEM, TEXAS CENTRAL ZONE (4203) (US FEET) (BASESTATION MIDLAND).

2) ELEVATIONS ARE NAD 1988.

GRID & BEARING KEYED NOTES:

01 COM E89-5692 BENCHMARK
N: 10713172.680
E: 1749615.295
EL: 2799.86

02 WASTEWATER MANHOLE COVER
N: 10713597.900
E: 1751122.055
EL: 2792.61

03 DUNAWAY 60D NAIL
N: 10714419.420
E: 1754530.589
EL: 2799.72

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:200
PROJECT NO.: BPU19-05
DATE: MAY 2022

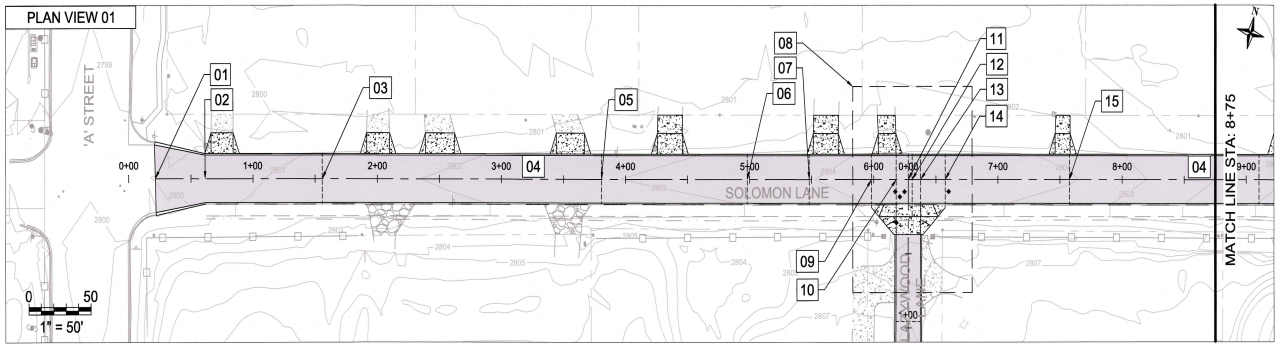
MIDLAND Engineering Services

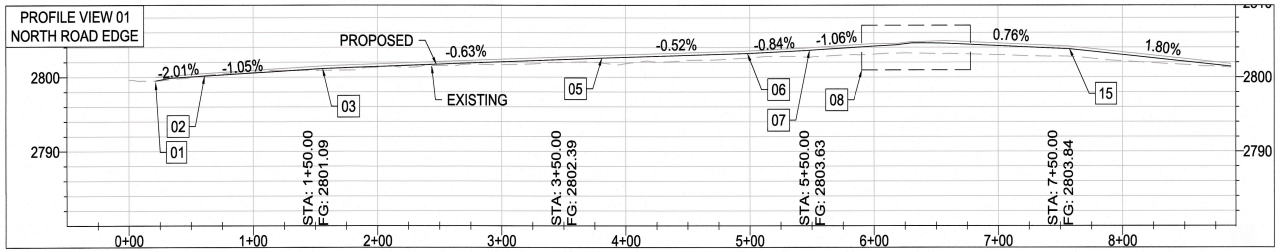
SOLOMON LANE PAVING BOND PROJECT
MASTER LAYOUT

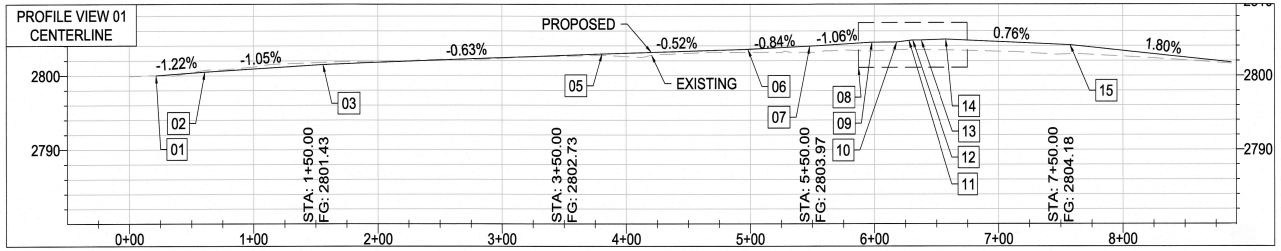
STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

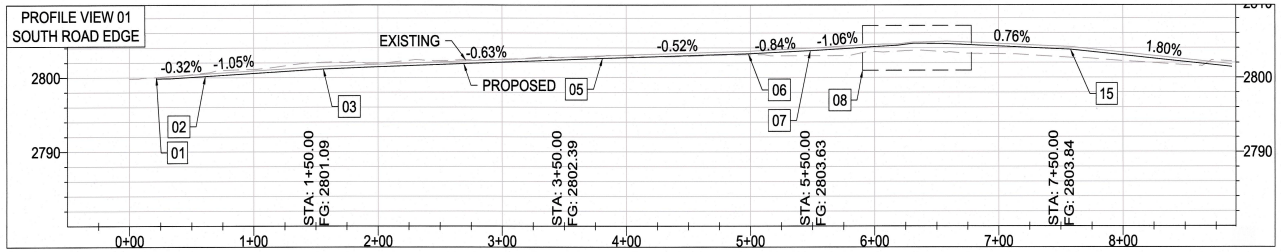
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OF 64

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PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

PAVEMENT KEYED NOTES:

01 RD-A STA: 0+21.37
START PROJECT
START TRANSITION 45' TO 34' ASPHALT CROSS SECTION A-A.
N: 10713185.84
E: 1749665.88
CENTERLINE EG = 2800.00
NORTH EG = 2799.34
SOUTH EG = 2800.03

02 RD-A STA: 0+61.39
END TRANSITION 45' TO 34' ASPHALT CROSS SECTION A-A.
CENTERLINE FG = 2800.45
NORTH EG = 2800.21
NORTH FG = 2800.11
SOUTH EG = 2800.72
SOUTH FG = 2800.11

03 RD-A STA: 1+55.78
GRADE BREAK
CENTERLINE FG = 2801.50
NORTH EG = 2800.91
NORTH FG = 2801.16
SOUTH EG = 2802.06
SOUTH FG = 2801.16

04 2846-SY HMAC PAVEMENT PER SHEET 17.

05 RD-A STA: 3+80.62
GRADE BREAK
CENTERLINE FG = 2802.92
NORTH EG = 2801.93
NORTH FG = 2802.58
SOUTH EG = 2802.87
SOUTH FG = 2802.58

06 RD-A STA: 4+98.04
GRADE BREAK
CENTERLINE FG = 2803.53
NORTH EG = 2802.58
NORTH FG = 2803.19
SOUTH EG = 2803.06
SOUTH FG = 2803.19

07 RD-A STA: 5+48.04
GRADE BREAK
CENTERLINE FG = 2803.95
NORTH EG = 2802.68
NORTH FG = 2803.61
SOUTH EG = 2802.93
SOUTH FG = 2803.61

08 INTERSECTION VIEW 01, SHEET 25.

09 RD-A STA: 5+98.13
START TRANSITION ASPHALT CROSS SECTION A-A TO B-B.
CENTERLINE FG = 2804.48
NORTH EG = 2803.05
NORTH FG = 2804.14
SOUTH EG = 2803.51
SOUTH FG = 2804.14

10 RD-A STA: 6+18.06
END TRANSITION ASPHALT CROSS SECTION A-A TO B-B.
CENTERLINE FG = 2804.50
NORTH EG = 2803.20
NORTH FG = 2804.33
SOUTH EG = 2803.54
SOUTH FG = 2804.33

11 RD-A STA: 6+27.81
RD-B STA: 0+00.00
GRADE BREAK
CENTERLINE FG = 2804.72

12 RD-A STA: 6+30.83
GRADE BREAK
CENTERLINE FG = 2804.77
NORTH EG = 2803.22
NORTH FG = 2804.60
SOUTH EG = 2803.65
SOUTH FG = 2804.60

13 RD-A STA: 6+37.56
START TRANSITION ASPHALT CROSS SECTION B-B TO A-A.
CENTERLINE FG = 2804.76
NORTH EG = 2803.19
NORTH FG = 2804.59
SOUTH EG = 2803.66
SOUTH FG = 2804.59

14 RD-A STA: 6+57.61
END TRANSITION ASPHALT CROSS SECTION B-B TO A-A.
CENTERLINE FG = 2804.88
NORTH EG = 2803.14
NORTH FG = 2804.54
SOUTH EG = 2803.36
SOUTH FG = 2804.54

15 RD-A STA: 7+57.59
GRADE BREAK
CENTERLINE FG = 2804.12
NORTH EG = 2802.76
NORTH FG = 2803.78
SOUTH EG = 2802.68
SOUTH FG = 2803.78

PACKET 4.333 August 9, 2022

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:10
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

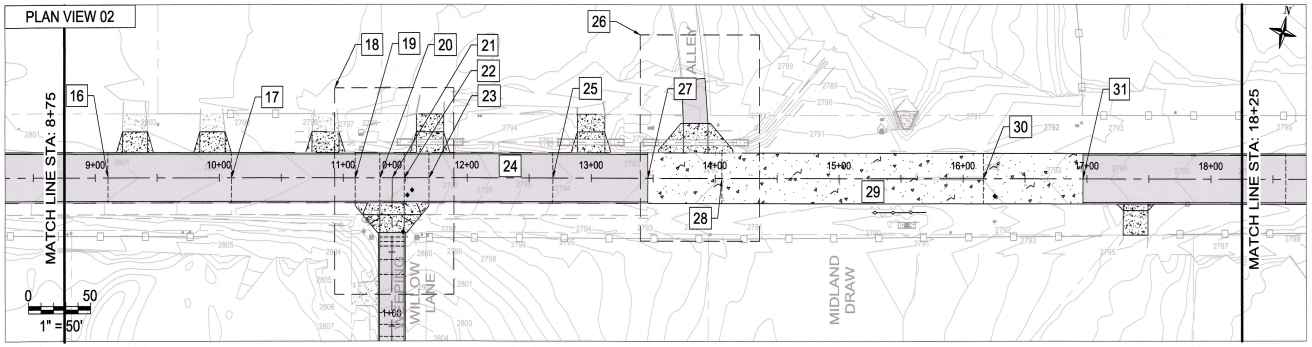
MIDLAND Engineering Services

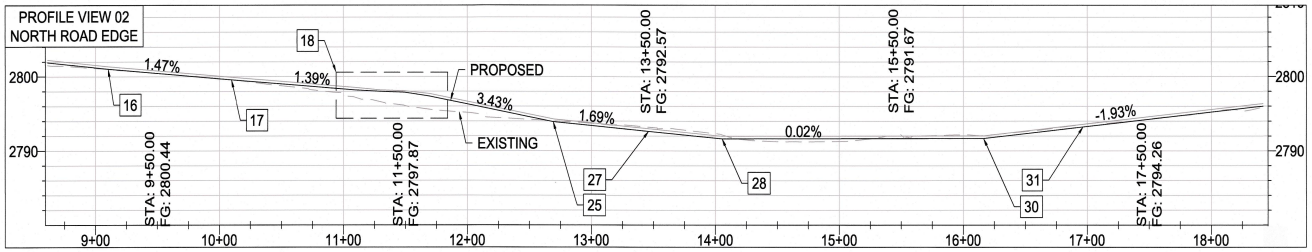
SOLOMON LANE PAVING
BOND PROJECT

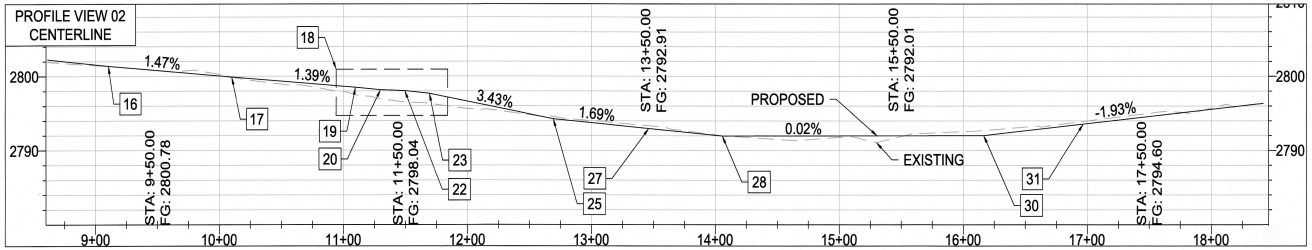
ROAD PLAN & PROFILE
SOLOMON LANE: 1 OF 5

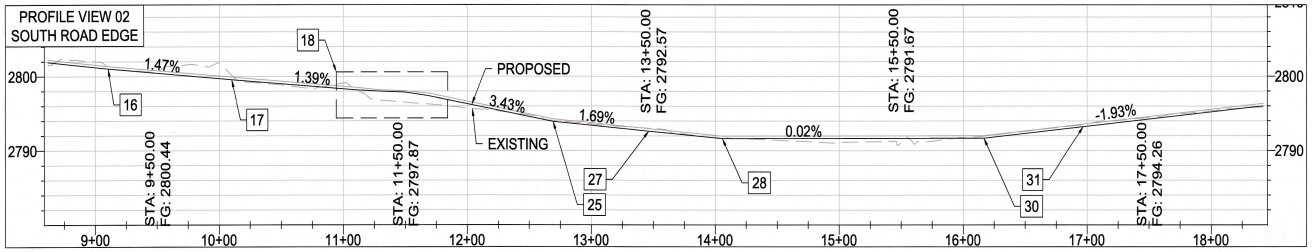
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
May 31, 2022

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PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

PAVEMENT KEYED NOTES:

16 RD-A STA: 9+10.29
GRADE BREAK
CENTERLINE FG = 2801.37
NORTH EG = 2801.00
NORTH FG = 2801.03
SOUTH EG = 2801.27
SOUTH FG = 2801.03

17 RD-A STA: 10+09.75
GRADE BREAK
CENTERLINE FG = 2799.91
NORTH EG = 2799.58
NORTH FG = 2799.57
SOUTH EG = 2800.20
SOUTH FG = 2799.57

18 INTERSECTION VIEW 02, SHEET 26.

19 RD-A STA: 11+09.72
START TRANSITION ASPHALT CROSS SECTION A-A TO B-B.
CENTERLINE FG = 2798.51
NORTH EG = 2797.18
NORTH FG = 2798.17
SOUTH EG = 2798.23
SOUTH FG = 2798.17

20 RD-A STA: 11+29.64
END TRANSITION ASPHALT CROSS SECTION A-A TO B-B.
CENTERLINE FG = 2798.17
NORTH EG = 2796.60
NORTH FG = 2798.00
SOUTH EG = 2796.79
SOUTH FG = 2798.00

21 RD-A STA: 11+39.42
RD-C STA: 0+00.00
CENTERLINE FG = 2798.11

22 RD-A STA: 11+49.14
START TRANSITION ASPHALT CROSS SECTION B-B TO A-A.
CENTERLINE FG = 2798.05
NORTH EG = 2796.10
NORTH FG = 2797.88
SOUTH EG = 2796.53
SOUTH FG = 2797.88

23 RD-A STA: 11+69.14
END TRANSITION ASPHALT CROSS SECTION B-B TO A-A.
CENTERLINE FG = 2797.70
NORTH EG = 2795.58
NORTH FG = 2797.36
SOUTH EG = 2796.26
SOUTH FG = 2797.36

24 2055-SY HMAC PAVEMENT PER SHEET 18.

25 RD-A STA: 12+69.07
GRADE BREAK
CENTERLINE FG = 2794.27
NORTH EG = 2794.03
NORTH FG = 2793.93
SOUTH EG = 2794.07
SOUTH FG = 2793.93

26 INTERSECTION VIEW 03, SHEET 27.

27 RD-A STA: 13+45.71
END ASPHALT CROSS SECTION A-A.
START CONCRETE CROSS SECTION C-C.
SLEEPER SLAB TRANSITION DETAIL D09, SHEET 60.
CENTERLINE FG = 2792.98
NORTH EG = 2793.19
NORTH FG = 2792.64
SOUTH EG = 2793.03
SOUTH FG = 2792.64

28 RD-A STA: 14+05.51
GRADE BREAK
CENTERLINE FG = 2791.97
NORTH EG = 2792.16
NORTH FG = 2791.63
SOUTH EG = 2791.76
SOUTH FG = 2791.63

29 1326-SY CONCRETE PAVEMENT PER SHEET 18.

30 RD-A STA: 16+16.53
GRADE BREAK
CENTERLINE FG = 2792.02
NORTH EG = 2792.08
NORTH FG = 2791.68
SOUTH EG = 2791.95
SOUTH FG = 2791.68

31 RD-A STA: 16+96.71
END CONCRETE CROSS SECTION C-C.
SLEEPER SLAB TRANSITION DETAIL D09, SHEET 60.
START ASPHALT CROSS SECTION A-A.
CENTERLINE FG = 2793.57
NORTH EG = 2793.57
NORTH FG = 2793.23
SOUTH EG = 2793.50
SOUTH FG = 2793.23

PACKET

August 9, 2022

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:10
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

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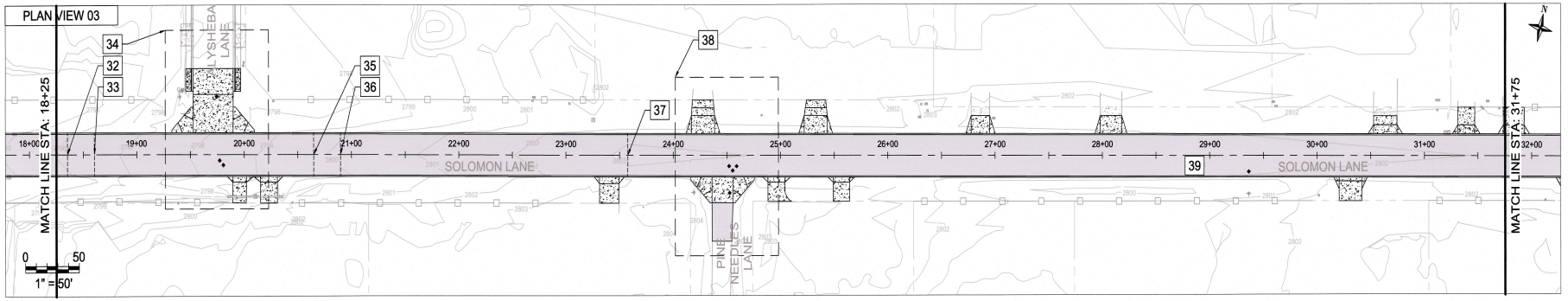
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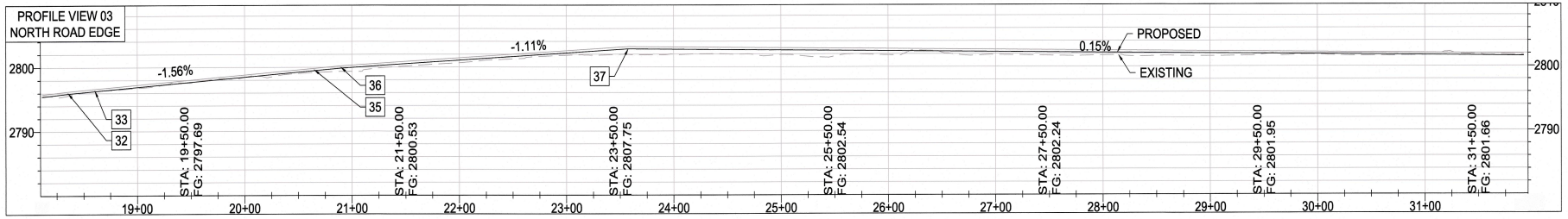
ROAD PLAN & PROFILE
SOLOMON LANE: 2 OF 5

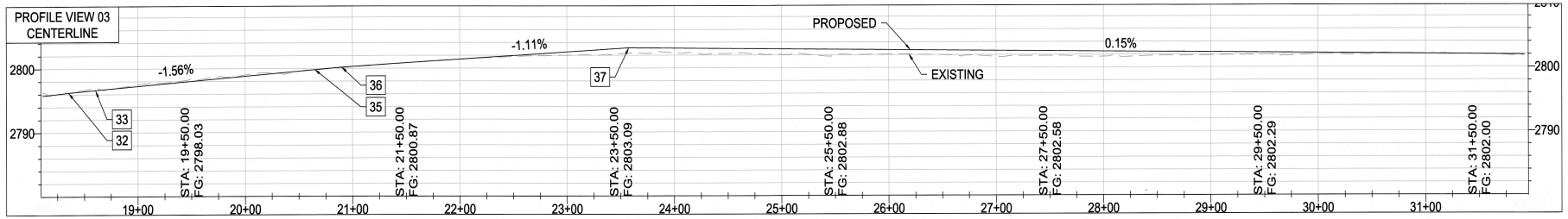
STATE OF TEXAS
MAY 31, 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

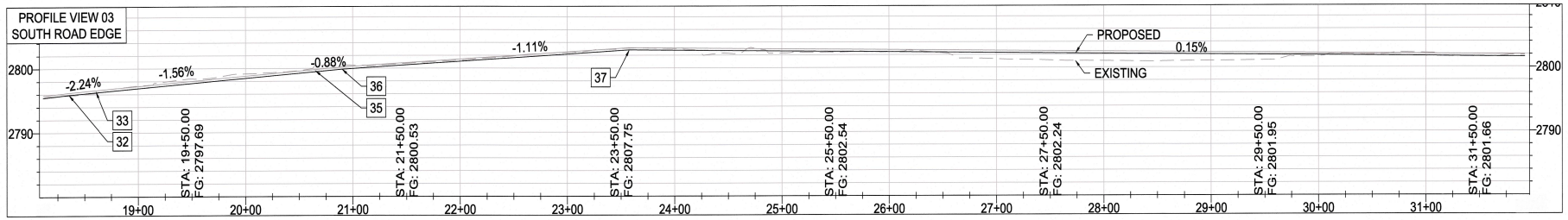
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OF 64

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PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

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V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

PAVEMENT KEYED NOTES:

32 RD-A STA: 18+35.36
START TRANSITION ASPHALT CROSS SECTION A-A TO D-D.
CENTERLINE FG = 2796.25
NORTH EG = 2795.63
NORTH FG = 2795.91
SOUTH EG = 2795.81
SOUTH FG = 2795.91

33 RD-A STA: 18+60.36
END TRANSITION ASPHALT CROSS SECTION A-A TO D-D.
CENTERLINE FG = 2796.64
NORTH EG = 2795.
NORTH FG = 2796.30
SOUTH EG = 2795.
SOUTH FG = 2796.47

34 INTERSECTION VIEW 04, SHEET 28.

35 RD-A STA: 20+64.76
START TRANSITION ASPHALT CROSS SECTION A-A TO D-D.
CENTERLINE FG = 2799.82
NORTH EG = 279
NORTH FG = 2799.48
SOUTH EG = 279
SOUTH FG = 2799.65

36 RD-A STA: 20+89.76
END TRANSITION ASPHALT CROSS SECTION A-A TO D-D.
CENTERLINE FG = 2800.21
NORTH EG = 2799.35
NORTH FG = 2799.87
SOUTH EG = 2800.50
SOUTH FG = 2799.87

37 RD-A STA: 23+57.56
GRADE BREAK
CENTERLINE FG = 2803.17
NORTH EG = 2801.97
NORTH FG = 2802.83
SOUTH EG = 2803.10
SOUTH FG = 2802.83

38 INTERSECTION VIEW 05, SHEET 29.

39 4556-SY HMAC PAVEMENT PER SHEET 19.

PACKET

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Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:10
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

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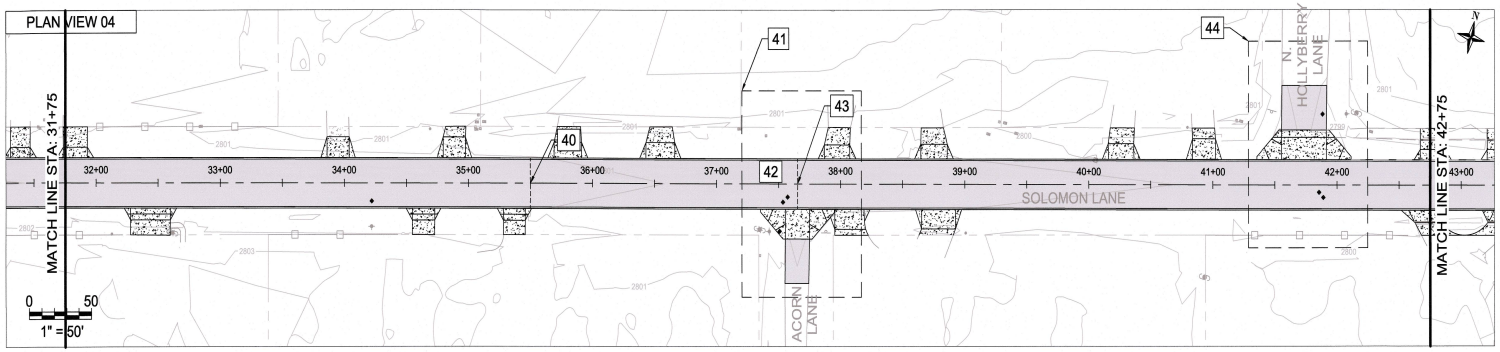
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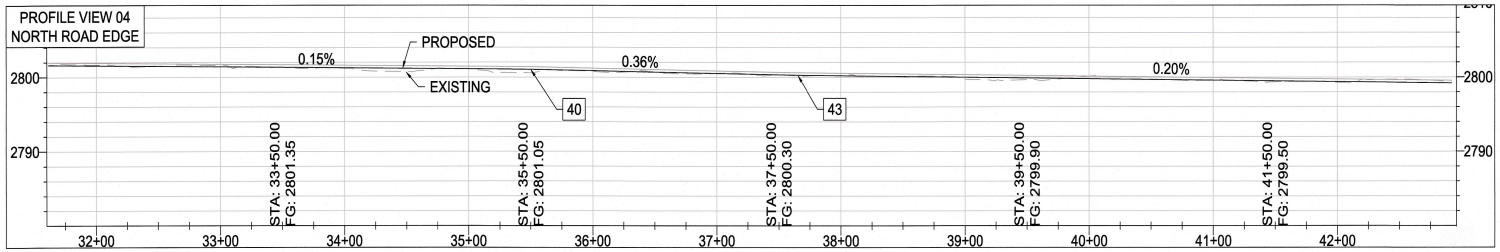
ROAD PLAN & PROFILE
SOLOMON LANE: 3 OF 5

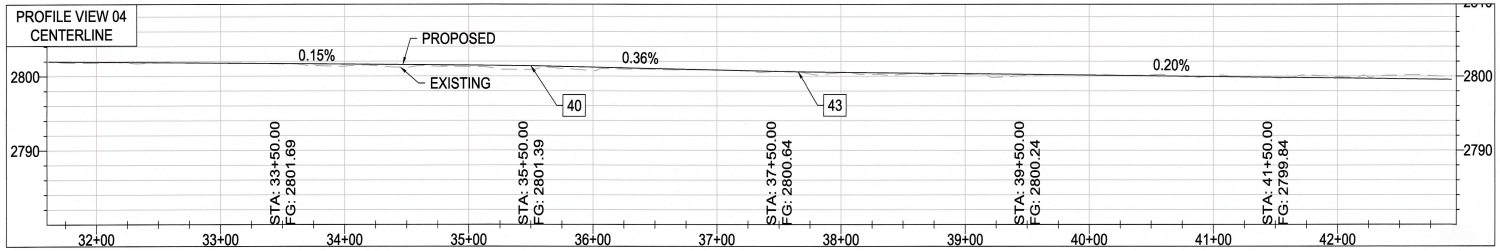
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
MAY 31, 2022

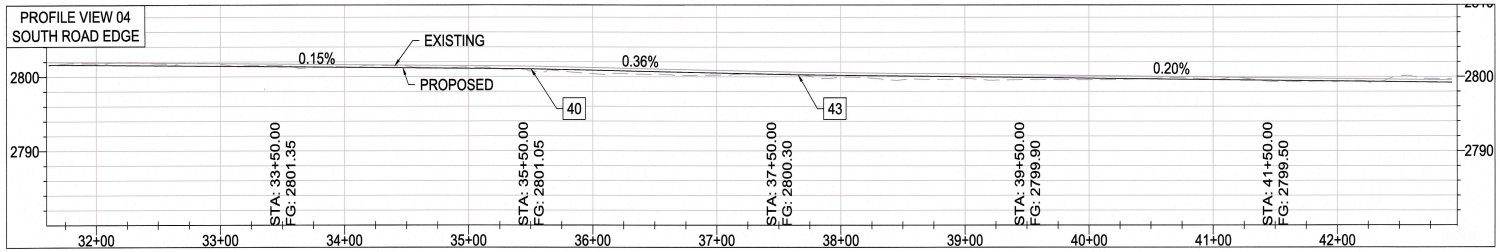
19
OF 64

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PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

PAVEMENT KEYED NOTES:

40 RD-A STA: 35+50.00
GRADE BREAK
CENTERLINE FG = 2801.39
NORTH EG = 2800.58
NORTH FG = 2801.05
SOUTH EG = 2800.74
SOUTH FG = 2801.05

41 INTERSECTION VIEW 06, SHEET 30.

42 3829-SY HMAC PAVEMENT PER SHEET 20.

43 RD-A STA: 37+65.30
GRADE BREAK
CENTERLINE FG = 2800.61
NORTH EG = 2800.19
NORTH FG = 2800.27
SOUTH EG = 2800.34
SOUTH FG = 2800.27

44 INTERSECTION VIEW 07, SHEET 31.

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:10
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

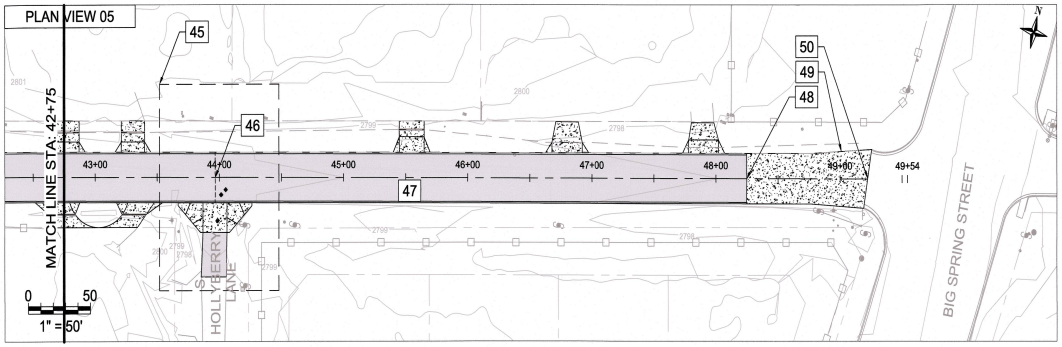
SOLOMON LANE PAVING BOND PROJECT

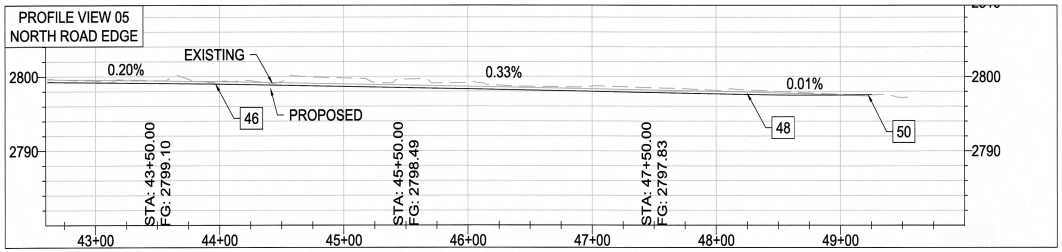
ROAD PLAN & PROFILE
SOLOMON LANE: 4 OF 5

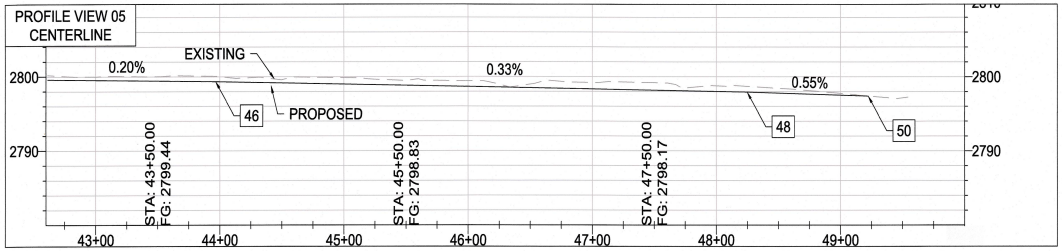
STATE OF TEXAS
MAY 31, 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

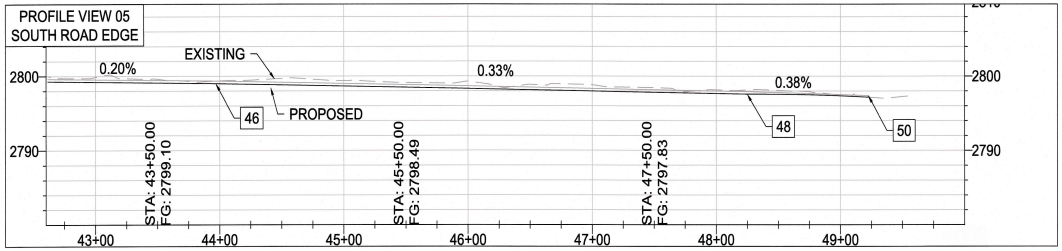
20
OF 64

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PAVEMENT KEYED NOTES:

45 INTERSECTION VIEW 08, SHEET 32.

46 RD-A STA: 43+96.62
GRADE BREAK
CENTERLINE FG = 2799.34
NORTH EG = 2799.22
NORTH FG = 2799.00
SOUTH EG = 2799.36
SOUTH FG = 2799.00

47 1830-SY HMAC PAVEMENT PER SHEET 21.

48 RD-A STA: 48+24.75
START TRANSITION FROM CONCRETE CROSS SECTION C-C
TO CONCRETE CROSS SECTION E-E.
SLEEPER SLAB TRANSITION DETAIL D09, SHEET 60.
CENTERLINE FG = 2797.92
NORTH EG = 2798.42
NORTH FG = 2797.58
SOUTH EG = 2798.38
SOUTH FG = 2797.58

49 386-SY CONCRETE PAVEMENT PER SHEET 21.

50 RD-A STA: 49+22.32
END TRANSITION FROM CONCRETE CROSS SECTION C-C
TO CONCRETE CROSS SECTION E-E.
END PROJECT.
N: 10714417.74
E: 1754409.48
CENTERLINE EG = 2797.39
NORTH EG = 2797.57
SOUTH EG = 2797.22

PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

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PACKET

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Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:10
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

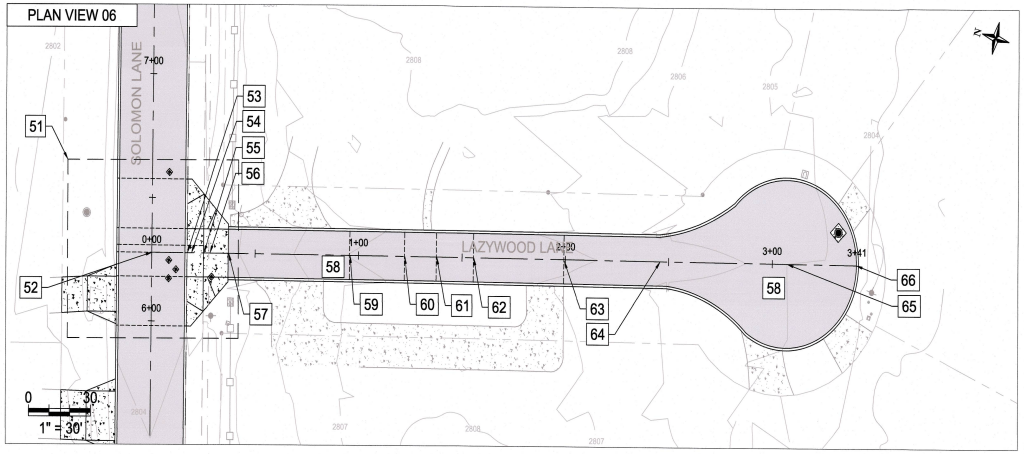
SOLOMON LANE PAVING
BOND PROJECT

ROAD PLAN & PROFILE
SOLOMON LANE: 5 OF 5

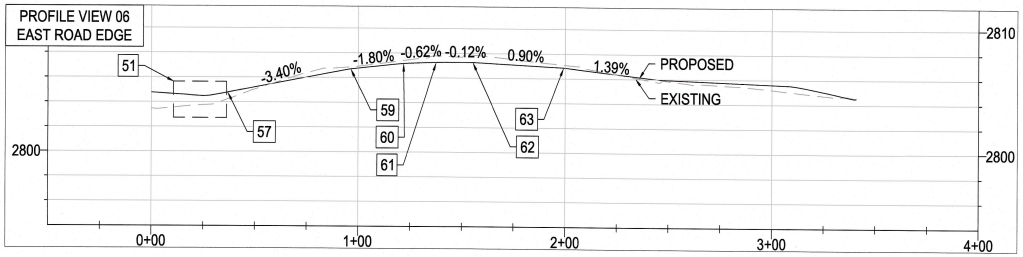
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
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PROFESSIONAL ENGINEER
May 31, 2022

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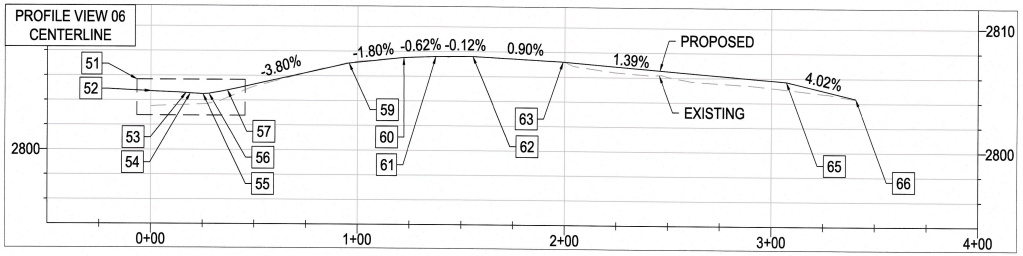
PLAN VIEW 06



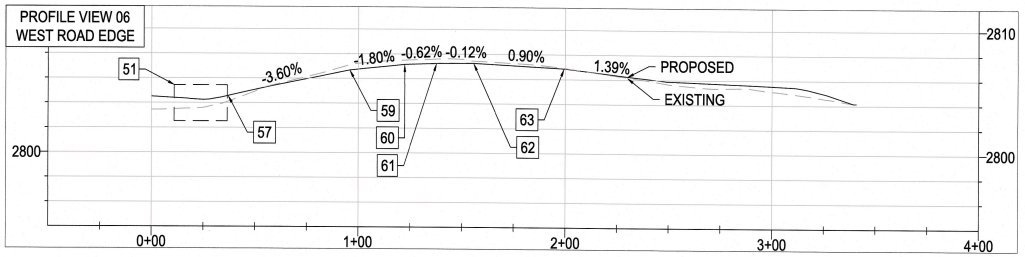
PROFILE VIEW 06
EAST ROAD EDGE



PROFILE VIEW 06
CENTERLINE



PROFILE VIEW 06
WEST ROAD EDGE



PAVING NOTES:

I) SEE SHEET 2 NOTES.

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V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

PAVEMENT KEYED NOTES:

51 INTERSECTION VIEW 01, SHEET 25.

52 RD-A STA: 6+27.81
RD-B STA: 0+00.00
CENTERLINE FG = 2804.72

53 RD-B STA: 0+17.00
START VALLEY GUTTER.

54 RD-B STA: 0+19.00
GRADE BREAK
CENTERLINE FG = 2804.51
EAST EG = 2803.72
EAST FG = 2804.55
WEST EG = 2803.16
WEST FG = 2804.29

55 RD-B STA: 0+25.00
DRAINAGE FLOWLINE
CENTERLINE FG = 2804.45
EAST EG = 2803.76
EAST FG = 2804.49
WEST EG = 2803.60
WEST FG = 2804.23

56 RD-B STA: 0+28.00
GRADE BREAK
CENTERLINE FG = 2804.48
EAST EG = 2803.78
EAST FG = 2804.52
WEST EG = 2803.71
WEST FG = 2804.26

57 RD-B STA: 0+37.00
END VALLEY GUTTER.
START ASPHALT CROSS SECTION F-F.
GRADE BREAK
CENTERLINE FG = 2804.72
EAST EG = 2804.25
EAST FG = 2804.53
WEST EG = 2804.11
WEST FG = 2804.70

58 938-SY HMAC PAVEMENT PER SHEET 22.

59 RD-B STA: 0+95.69
GRADE BREAK
CENTERLINE FG = 2807.03
EAST EG = 2806.83
EAST FG = 2806.83
WEST EG = 2807.11
WEST FG = 2806.83

60 RD-B STA: 1+22.16
GRADE BREAK
CENTERLINE FG = 2807.50
EAST EG = 2807.39
EAST FG = 2807.30
WEST EG = 2807.50
WEST FG = 2807.30

61 RD-B STA: 1+37.65
GRADE BREAK
CENTERLINE FG = 2807.60
EAST EG = 2807.78
EAST FG = 2807.40
WEST EG = 2807.60
WEST FG = 2807.40

62 RD-B STA: 1+55.41
GRADE BREAK
CENTERLINE FG = 2807.62
EAST EG = 2807.86
EAST FG = 2807.42
WEST EG = 2807.46
WEST FG = 2807.42

63 RD-B STA: 1+99.29
GRADE BREAK
CENTERLINE FG = 2807.23
EAST EG = 2807.10
EAST FG = 2807.03
WEST EG = 2806.98
WEST FG = 2807.03

64 RD-B STA: 2+45.62
END ASPHALT CROSS SECTION F-F.
START CUL-DE-SAC SECTION
CENTERLINE FG = 2806.31

65 RD-B STA: 3+07.13
CENTER OF CUL-DE-SAC
CENTERLINE FG = 2805.73

66 RD-B STA: 3+40.73
END PAVEMENT.
CENTERLINE EG = 2804.38

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:6
HORIZ. SCALE: 1:30
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT

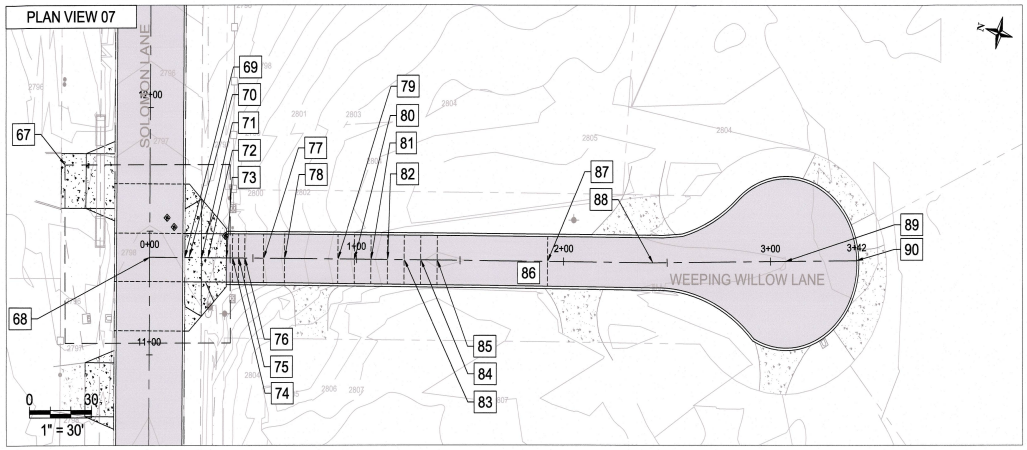
ROAD PLAN & PROFILE
LAZYWOOD LANE

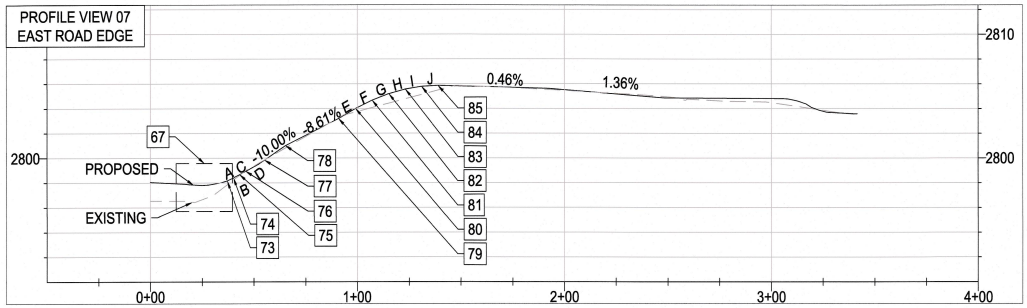
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
May 31, 2022

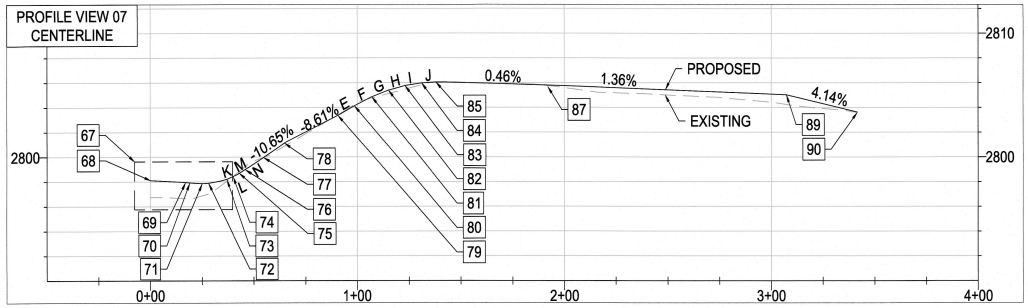
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OF 64

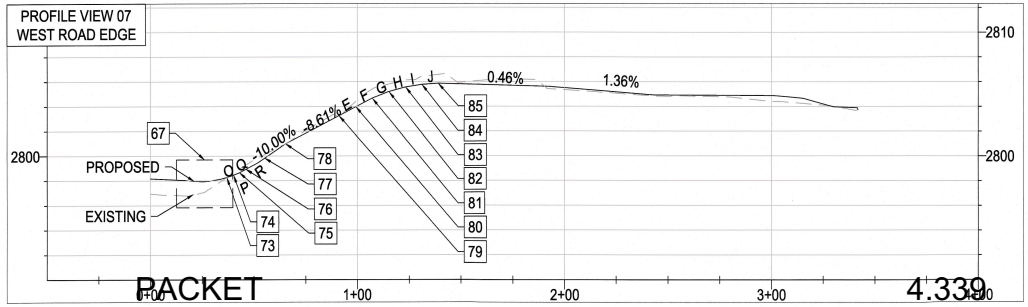
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August 9, 2022









PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

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PAVEMENT KEYED NOTES:

67 INTERSECTION VIEW 02, SHEET 26.

68 RD-A STA: 11+39.42
RD-C STA: 0+00.00
CENTERLINE FG = 2798.11

69 RD-C STA: 0+17.00
START VALLEY GUTTER.

70 RD-C STA: 0+19.00
GRADE BREAK
CENTERLINE FG = 2797.90
EAST EG = 2796.50
EAST FG = 2797.84
WEST EG = 2796.78
WEST FG = 2797.96

71 RD-C STA: 0+25.00
DRAINAGE FLOWLINE
CENTERLINE FG = 2797.84
EAST EG = 2796.65
EAST FG = 2797.78
WEST EG = 2797.03
WEST FG = 2797.90

72 RD-C STA: 0+28.00
GRADE BREAK
CENTERLINE FG = 2797.87
EAST EG = 2796.84
EAST FG = 2797.81
WEST EG = 2797.29
WEST FG = 2797.93

73 RD-C STA: 0+37.00
END VALLEY GUTTER.
START ASPHALT CROSS SECTION F-F.
GRADE BREAK
CENTERLINE FG = 2798.01
EAST EG = 2797.85
EAST FG = 2797.99
WEST EG = 2798.31
WEST FG = 2798.06

74 RD-C STA: 0+40.00
GRADE BREAK
CENTERLINE FG = 2798.16
EAST EG = 2798.22
EAST FG = 2798.14
WEST EG = 2798.63
WEST FG = 2798.18

75 RD-C STA: 0+43.00
GRADE BREAK
CENTERLINE FG = 2798.36
EAST EG = 2798.59
EAST FG = 2798.35
WEST EG = 2798.95
WEST FG = 2798.36

76 RD-C STA: 0+46.00
GRADE BREAK
CENTERLINE FG = 2798.62
EAST EG = 2798.96
EAST FG = 2798.60
WEST EG = 2799.27
WEST FG = 2798.60

77 RD-C STA: 0+52.00
GRADE BREAK
CENTERLINE FG = 2799.60
EAST EG = 2799.83
EAST FG = 2799.50
WEST EG = 2799.59
WEST FG = 2800.11

78 RD-C STA: 0+65.20
GRADE BREAK
CENTERLINE FG = 2801.20
EAST EG = 2800.82
EAST FG = 2801.00
WEST EG = 2801.00
WEST FG = 2801.00

SLOPE LINE	SLOPE PERCENT (%)	SLOPE LINE	SLOPE PERCENT (%)
A	-5.00%	J	-1.02%
B	-7.00%	K	-5.00%
C	-8.33%	L	-6.67%
D	-10.00%	M	-8.67%
E	-9.61%	N	-10.86%
F	-8.57%	O	-4.00%
G	-6.68%	P	-6.00%
H	-4.68%	Q	-8.00%
I	-2.68%	R	-10.00%

* SLOPES IDENTICAL FOR ALL PROFILE VIEWS LABEL

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Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:6
HORIZ. SCALE: 1:30
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT

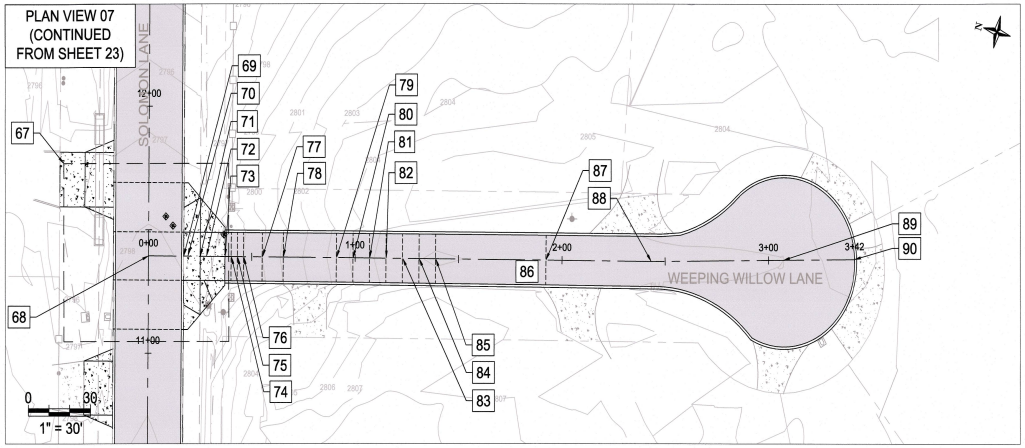
ROAD PLAN & PROFILE
WEEPING WILLOW LANE: 1 OF 2

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
MAY 31, 2022

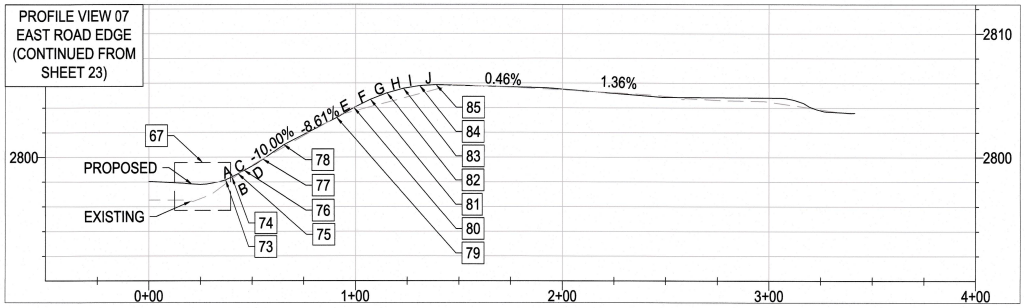
23
OF 64

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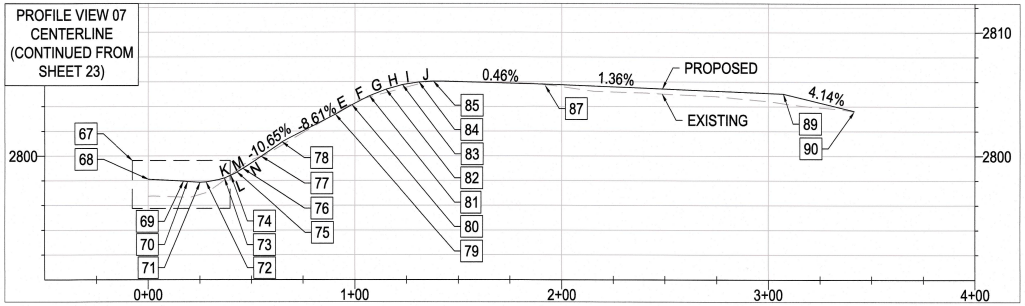
PLAN VIEW 07
(CONTINUED
FROM SHEET 23)



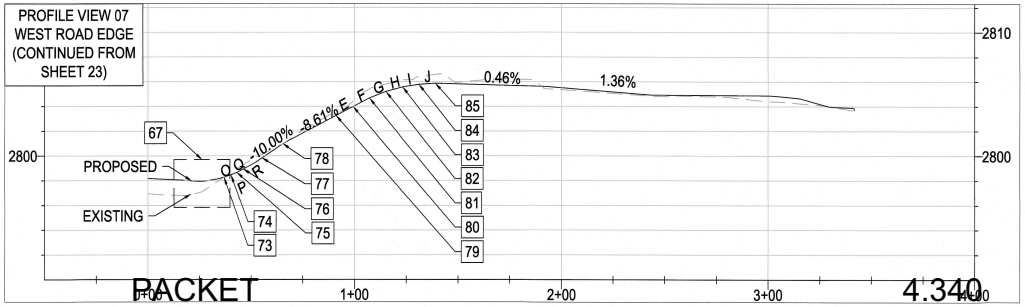
PROFILE VIEW 07
EAST ROAD EDGE
(CONTINUED FROM
SHEET 23)



PROFILE VIEW 07
CENTERLINE
(CONTINUED FROM
SHEET 23)



PROFILE VIEW 07
WEST ROAD EDGE
(CONTINUED FROM
SHEET 23)



PAVING NOTES: (CONTINUED FROM SHEET 23)

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

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PAVEMENT KEYED NOTES: (CONTINUED FROM SHEET 23)

79 RD-C STA: 0+90.92
GRADE BREAK
CENTERLINE FG = 2803.40
EAST EG = 2803.25
EAST FG = 2803.20
WEST EG = 2803.20
WEST FG = 2803.20

80 RD-C STA: 0+99.00
GRADE BREAK
CENTERLINE FG = 2804.18
EAST EG = 2803.71
EAST FG = 2803.98
WEST EG = 2804.36
WEST FG = 2803.98

81 RD-C STA: 1+07.00
GRADE BREAK
CENTERLINE FG = 2804.86
EAST EG = 2804.06
EAST FG = 2804.66
WEST EG = 2805.38
WEST FG = 2804.66

82 RD-C STA: 1+15.00
GRADE BREAK
CENTERLINE FG = 2805.39
EAST EG = 2804.41
EAST FG = 2805.19
WEST EG = 2805.81
WEST FG = 2805.19

83 RD-C STA: 1+23.00
GRADE BREAK
CENTERLINE FG = 2805.77
EAST EG = 2804.77
EAST FG = 2805.57
WEST EG = 2806.15
WEST FG = 2805.57

84 RD-C STA: 1+31.00
GRADE BREAK
CENTERLINE FG = 2805.98
EAST EG = 2805.12
EAST FG = 2805.78
WEST EG = 2806.42
WEST FG = 2805.78

85 RD-C STA: 1+39.00
GRADE BREAK
CENTERLINE FG = 2806.06
EAST EG = 2805.47
EAST FG = 2805.86
WEST EG = 2806.59
WEST FG = 2805.86

86 951-SY HMAC PAVEMENT PER SHEET 24.

87 RD-C STA: 1+92.24
GRADE BREAK
CENTERLINE FG = 2805.82
EAST EG = 2805.52
EAST FG = 2805.62
WEST EG = 2805.42
WEST FG = 2805.62

88 RD-C STA: 2+43.20
END ASPHALT CROSS SECTION F-F.
START CUL-DE-SAC SECTION
CENTERLINE FG = 2805.12

89 RD-C STA: 3+07.27
CENTER OF CUL-DE-SAC
CENTERLINE FG = 2804.25

90 RD-C STA: 3+41.60
END PAVEMENT.
CENTERLINE EG = 2803.61

SLOPE LINE	SLOPE PERCENT (%)	SLOPE LINE	SLOPE PERCENT (%)
A	-5.00%	J	-1.02%
B	-7.00%	K	-5.00%
C	-8.33%	L	-6.67%
D	-10.00%	M	-8.67%
E	-9.61%	N	-10.86%
F	-8.57%	O	-4.00%
G	-6.68%	P	-6.00%
H	-4.68%	Q	-6.00%
I	-2.68%	R	-10.00%

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PROJECT NO.: BPU19-05
DATE: MAY 2022

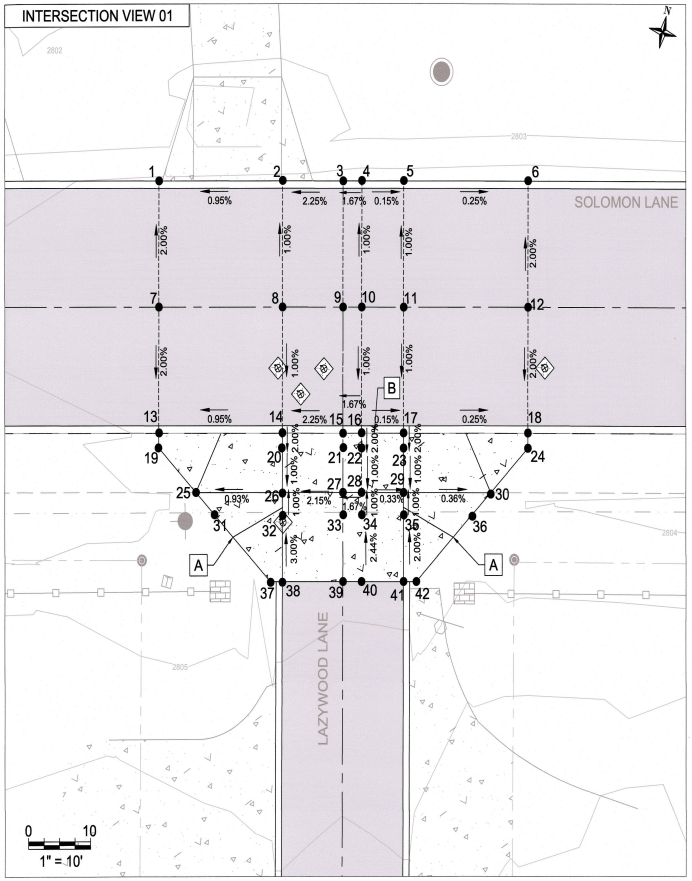
MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT
ROAD PLAN & PROFILE
WEEPING WILLOW LANE: 2 OF 2

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31 2022

24
OF 64

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INTERSECTION KEYED NOTES:

A 26.5-SY - 6" REINFORCE CONCRETE FILLET WITH NO CURB.

B 43.5-SY - 6" REINFORCED CONCRETE VALLEY GUTTER, 19.5' LENGTH.

PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

LAZYWOOD LANE INTERSECTION GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10713347.63	1750219.75	2804.14
2	FG	10713352.65	1750239.04	2804.33
3	FG	10713355.11	1750248.48	2804.55
4	FG	10713355.88	1750251.41	2804.60
5	FG	10713357.57	1750257.91	2804.59
6	FG	10713362.62	1750277.31	2804.54
7	CL	10713331.18	1750224.03	2804.48
8	CL	10713336.20	1750243.32	2804.50
9	CL	10713338.66	1750252.78	2804.72
10	CL	10713339.42	1750255.68	2804.77
11	CL	10713341.12	1750262.20	2804.76
12	CL	10713346.17	1750281.60	2804.88
13	FG	10713314.73	1750228.32	2804.14
14	FG	10713319.75	1750247.61	2804.33
15	CL	10713322.11	1750257.07	2804.55
16	FG	10713322.96	1750259.95	2804.60
17	FG	10713324.67	1750266.48	2804.59
18	FG	10713329.72	1750285.88	2804.54
19	FG	10713312.79	1750228.82	2804.11
20	FG	10713317.82	1750248.11	2804.29
21	CL	10713320.26	1750257.50	2804.51
22	FG	10713321.03	1750260.45	2408.56
23	FG	10713322.73	1750266.98	2804.55
24	FG	10713327.78	1750286.38	2804.50
25	FL	10713308.50	1750236.14	2804.11
26	FL	10713312.01	1750249.62	2804.23
27	CL FL	10713314.47	1750259.06	2804.45
28	FL	10713315.22	1750261.96	2804.50
29	FL	10713316.92	1750268.50	2804.49
30	FL	10713320.46	1750282.09	2804.45
31	FG	10713306.35	1750239.80	2804.15
32	FG	10713309.11	1750250.38	2804.26
33	CL	10713311.56	1750259.82	2804.48
34	FG	10713312.32	1750262.72	2804.53
35	FG	10713314.02	1750269.25	2804.52
36	FG	10713316.80	1750279.94	2804.49
37	FG	10713299.91	1750250.78	2804.47
38	FG	10713300.40	1750252.65	2804.53
39	CL	10713302.85	1750262.08	2804.72
40	FG	10713303.61	1750264.99	2804.75
41	FG	10713305.31	1750271.52	2804.70
42	FG	10713305.83	1750273.50	2804.70

EG EXISTING GRADE
EG CL EXISTING CENTERLINE GRADE
FG FINISH GRADE
FL FLOWLINE
CL CENTERLINE FINISH GRADE
CL FL CENTERLINE FLOWLINE

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
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MIDLAND Engineering Services

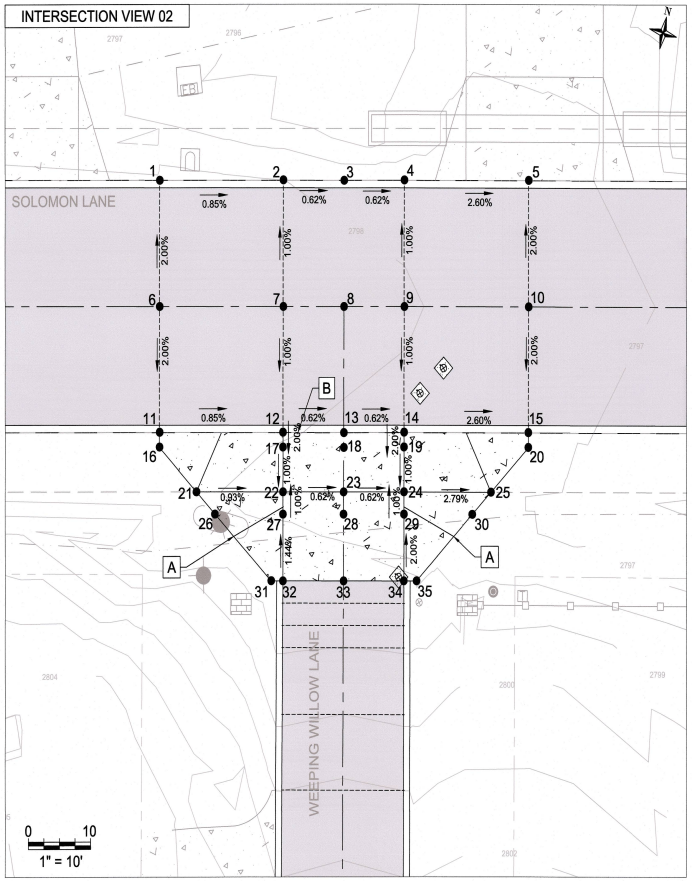
SOLOMON LANE PAVING
BOND PROJECT
INTERSECTION PLAN
1 OF 8

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
MAY 31, 2022

25
OF 64

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INTERSECTION VIEW 02



INTERSECTION KEYED NOTES:

A 26.5-SY - 6" REINFORCE CONCRETE FILLET WITH NO CURB.

B 43.5-SY - 6" REINFORCED CONCRETE VALLEY GUTTER, 19.5' LENGTH.

WEEPING WILLOW LANE INTERSECTION GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10713476.46	1750714.90	2798.17
2	FG	10713481.48	1750734.26	2798.00
3	FG	10713484.04	1750743.59	2797.94
4	FG	10713486.48	1750752.99	2797.88
5	FG	10713491.53	1750772.35	2797.36
6	CL	10713460.10	1750719.12	2798.51
7	CL	10713465.14	1750738.50	2798.17
8	CL	10713467.58	1750747.86	2798.11
9	CL	10713470.03	1750757.26	2798.05
10	CL	10713475.07	1750776.62	2797.70
11	FG	10713443.64	1750723.39	2798.17
12	FG	10713448.66	1750742.67	2798.00
13	CL	10713451.12	1750752.12	2797.94
14	FG	10713453.58	1750761.54	2797.88
15	FG	10713458.62	1750780.90	2797.36
16	FG	10713441.71	1750723.90	2798.13
17	FG	10713446.73	1750743.17	2797.96
18	CL	10713449.19	1750752.62	2797.90
19	FG	10713451.64	1750762.04	2797.84
20	FG	10713456.68	1750781.40	2797.32
21	FL	10713437.41	1750731.21	2798.03
22	FL	10713440.92	1750741.68	2797.90
23	CL FL	10713443.38	1750754.12	2797.84
24	FL	10713445.83	1750763.55	2797.78
25	FL	10713449.36	1750777.11	2797.39
26	FG	10713435.29	1750734.84	2798.00
27	FG	10713438.02	1750745.43	2797.93
28	CL	10713440.47	1750754.87	2797.87
29	FG	10713442.93	1750764.30	2797.81
30	FG	10713445.70	1750774.96	2797.55
31	FG	10713428.83	1750745.85	2798.06
32	FG	10713429.31	1750747.70	2798.06
33	CL	10713431.76	1750757.13	2798.01
34	FG	10713434.21	1750766.59	2797.99
35	FG	10713434.73	1750768.52	2797.99

EG EXISTING GRADE
EG CL EXISTING CENTERLINE GRADE
FG FINISH GRADE
FL FLOWLINE
CL CENTERLINE FINISH GRADE
CL FL CENTERLINE FLOWLINE

PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
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MIDLAND Engineering Services

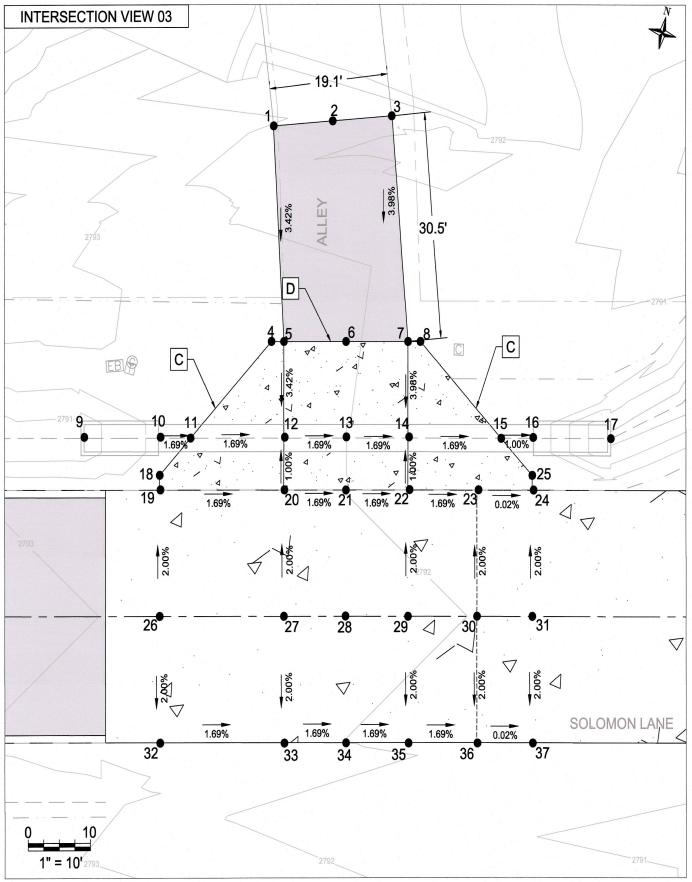
SOLOMON LANE PAVING
BOND PROJECT
INTERSECTION PLAN
2 OF 8

STATE OF TEXAS
MAY 31, 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

26
OF 64

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INTERSECTION VIEW 03



INTERSECTION KEYED NOTES:

C 20.0-SY - 6" REINFORCE CONCRETE FILLET WITH NO CURB.

D 35.6-SY - 6" REINFORCED CONCRETE VALLEY GUTTER, 20.0' LENGTH.

ALLEY INTERSECTION GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10713590.28	1750957.01	2793.44
2	EG CL	10713593.34	1750966.06	2792.99
3	EG	10713595.68	1750975.35	2793.34
4	FG	10713562.10	1750964.00	2792.39
5	FG	10713562.60	1750965.94	2792.40
6	CL	10713565.12	1750975.61	2792.14
7	FG	10713567.64	1750985.29	2792.13
8	FG	10713568.14	1750987.23	2792.11
9	FL	10713541.79	1750937.59	2790.53
10	FL	10713544.94	1750949.69	2790.28
11	FG	10713546.20	1750954.67	2792.21
	FL	-------	-------	2790.17
12	FG	10713550.02	1750969.21	2791.95
13	CL	10713552.54	1750978.89	2791.78
14	FG	10713555.06	1750988.57	2791.61
15	FG	10713558.84	1751003.08	2791.36
	FL	-------	-------	2789.14
16	FL	10713560.14	1751008.09	2789.03
17	FL	10713563.30	1751020.19	2788.78
18	FG	10713540.14	1750951.12	2792.51
19	FG	10713538.16	1750951.45	2792.49
20	FG	10713543.25	1750970.98	2792.15
21	CL	10713545.76	1750980.65	2791.98
22	FG	10713548.29	1750990.33	2791.81
23	FG	10713551.09	1751001.10	2791.63
24	FG	10713553.33	1751009.69	2791.63
25	FG	10713555.26	1751009.18	2791.59
26	CL	10713521.71	1750955.74	2792.83
27	CL	10713526.80	1750975.26	2792.49
28	CL	10713529.32	1750984.94	2792.32
29	CL	10713531.84	1750994.61	2792.16
30	CL	10713534.63	1751005.37	2791.97
31	CL	10713536.92	1751014.14	2791.97
32	FG	10713505.26	1750960.02	2792.49
33	FG	10713510.34	1750979.54	2792.15
34	FG	10713512.86	1750989.22	2791.98
35	FG	10713515.38	1750998.90	2791.81
36	FG	10713518.18	1751009.63	2791.63
37	FG	10713520.47	1751018.42	2791.63

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
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MIDLAND Engineering Services

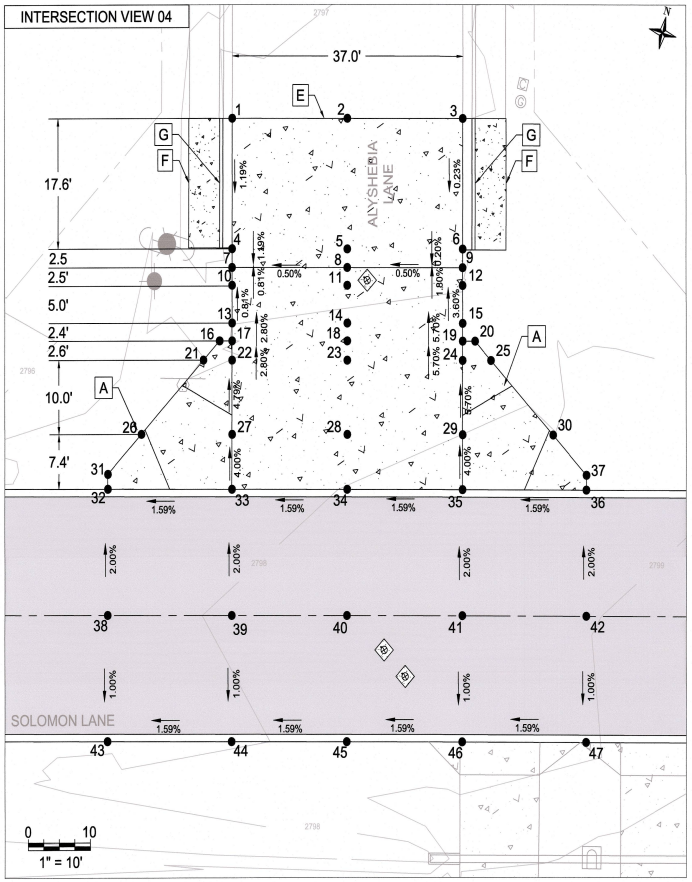
SOLOMON LANE PAVING
BOND PROJECT
INTERSECTION PLAN
3 OF 8

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
MAY 24 2022

27
OF 64

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INTERSECTION VIEW 04



INTERSECTION KEYED NOTES:

A 26.5-SY - 6" REINFORCE CONCRETE FILLET WITH NO CURB.

E 206.1-SY - 6" REINFORCED CONCRETE VALLEY GUTTER, 50.0' WIDE BY 37.0' LENGTH.

F 9.8-SY - 4" REINFORCED CONCRETE SIDEWALK.

G 17.6-LF - 6" TYPE A STANDARD CURB.

PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

ALYSHEBIA LANE INTERSECTION GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10713737.11	1751518.08	2796.99
2	EG CL	10713741.77	1751536.04	2796.82
3	EG	10713746.42	1751554.00	2796.98
4	FG	10713720.19	1751522.47	2796.78
5	CL	10713724.74	1751540.46	2796.86
6	FG	10713729.29	1751558.44	2796.94
7	FL	10713717.65	1751523.13	2796.75
8	CL FL	10713722.31	1751541.09	2796.84
9	FL	10713726.97	1751559.04	2796.93
10	FG	10713715.23	1751523.76	2796.77
11	CL	10713719.89	1751541.71	2796.88
12	FG	10713724.55	1751559.67	2796.98
13	FG	10713710.39	1751525.01	2796.81
14	CL	10713715.05	1751542.97	2796.99
15	FG	10713719.71	1751560.93	2797.16
16	FG	10713707.57	1751523.68	2796.86
17	FG	10713708.07	1751525.62	2796.88
18	CL	10713712.73	1751543.57	2797.09
19	FG	10713717.38	1751561.53	2797.30
20	FG	10713717.88	1751563.47	2797.31
21	FG	10713704.40	1751521.82	2796.91
22	FG	10713705.55	1751526.27	2796.95
23	CL	10713710.24	1751544.22	2797.20
24	FG	10713714.87	1751562.18	2797.44
25	FG	10713716.02	1751566.63	2797.49
26	FG	10713692.21	1751514.65	2797.24
27	FG	10713695.87	1751528.78	2797.43
28	CL	10713700.53	1751546.74	2797.72
29	FG	10713705.19	1751564.69	2798.01
30	FG	10713708.85	1751578.82	2798.21
31	FG	10713685.62	1751510.77	2797.32
32	FG	10713683.69	1751511.28	2797.42
33	FG	10713688.71	1751530.64	2797.73
34	CL	10713693.37	1751548.59	2798.02
35	FG	10713698.02	1751566.55	2798.31
36	FG	10713703.04	1751585.96	2798.62
37	FG	10713704.98	1751585.41	2798.52
38	CL	10713667.23	1751515.54	2797.76
39	CL	10713672.25	1751534.90	2798.07
40	CL	10713676.91	1751552.86	2798.36
41	CL	10713681.57	1751570.82	2798.65
42	CL	10713686.59	1751590.18	2798.96
43	FG	10713650.78	1751519.81	2797.59
44	FG	10713655.80	1751539.17	2797.90
45	FG	10713660.46	1751557.13	2798.19
46	FG	10713665.11	1751575.09	2798.48
47	FG	10713670.13	1751594.44	2798.79

EG EXISTING GRADE
EG CL EXISTING CENTERLINE GRADE
FG FINISH GRADE
FL FLOWLINE
CL CENTERLINE FINISH GRADE
CL FL CENTERLINE FLOWLINE

Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
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VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
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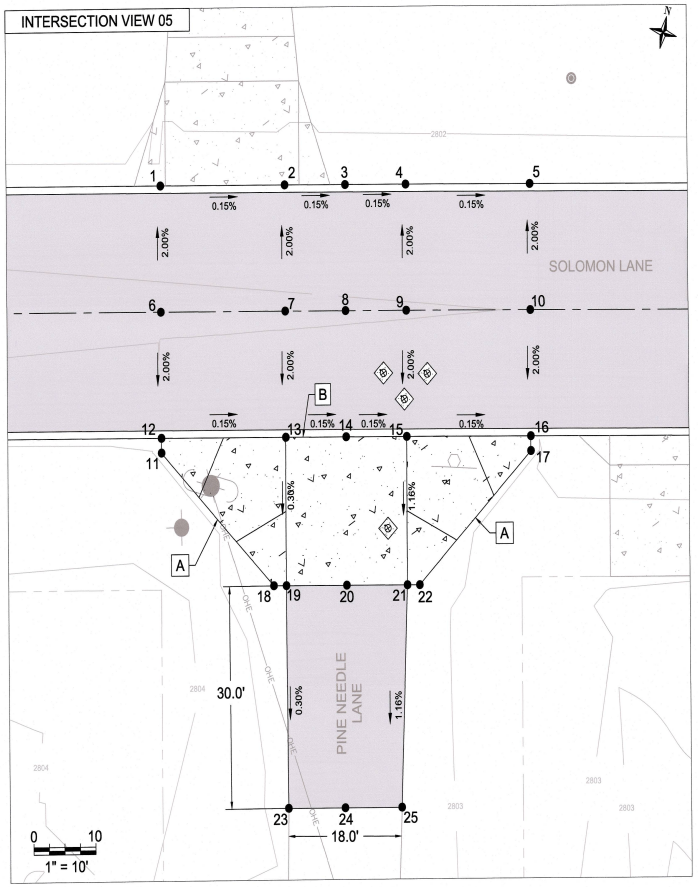
MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT
INTERSECTION PLAN
4 OF 8

STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

28
OF 64

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INTERSECTION KEYED NOTES:

A 26.5-SY - 6" REINFORCE CONCRETE FILLET WITH NO CURB.

B 43.5-SY - 6" REINFORCED CONCRETE VALLEY GUTTER, 19.5' LENGTH.

PINE NEEDLE LANE INTERSECTION GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10713805.06	1751979.30	2802.74
2	FG	10713810.09	1751998.68	2802.71
3	FG	10713812.53	1752008.09	2802.70
4	FG	10713814.98	1752017.53	2802.68
5	FG	10713820.00	17525036.89	2802.65
6	CL	10713788.61	1751983.56	2803.08
7	CL	10713793.63	1752002.93	2803.05
8	CL	10713796.08	1752012.36	2803.04
9	CL	10713798.52	1752021.80	2803.02
10	CL	10713903.54	1752041.16	2802.99
11	FG	10713770.22	1751988.33	2802.68
12	FG	10713772.15	1751987.83	2802.74
13	FG	10713777.17	1752007.19	2802.71
14	CL	10713779.62	1752016.63	2802.70
15	FG	10713782.07	1752026.07	2802.68
16	FG	10713787.09	1752045.43	2802.65
17	FG	10713785.15	1752045.93	2802.68
18	FG	10713757.31	1752010.28	2802.65
19	FG	10713757.81	1752012.21	2802.65
20	CL	10713760.26	1752021.65	2802.50
21	FG	10713762.71	1752031.09	2802.45
22	FG	10713763.21	1752033.02	2802.45
23	EG	10713728.97	1752019.91	2802.56
24	EG CL	10713731.14	1752028.78	2802.21
25	EG	10713733.45	1752037.60	2802.10

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:10
HORIZ. SCALE: BPU19-05
PROJECT NO.:
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT

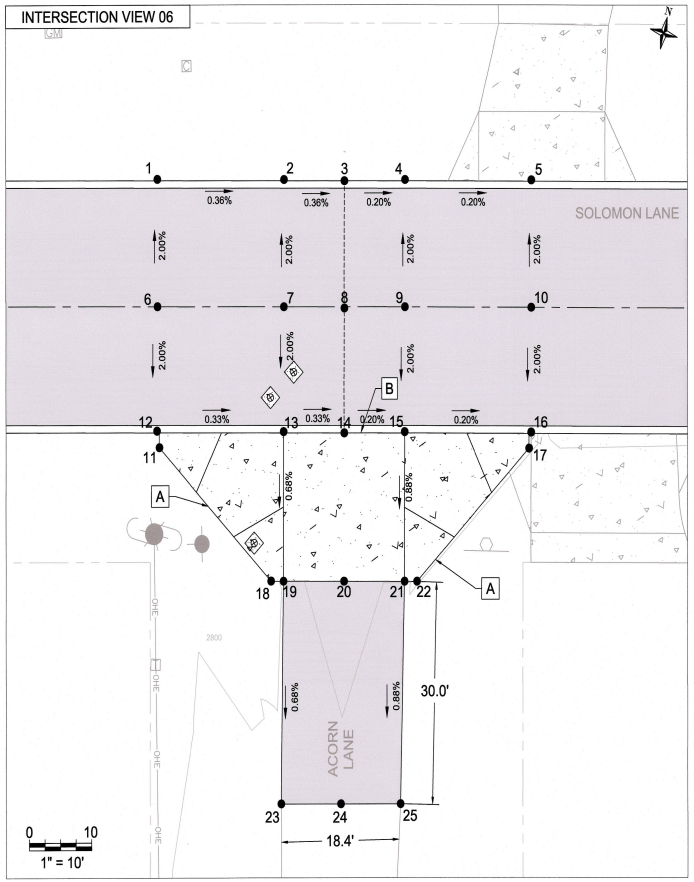
INTERSECTION PLAN 5 OF 8

STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

29
OF 64

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INTERSECTION VIEW 06



INTERSECTION KEYED NOTES:

A 26.5-SY - 6" REINFORCE CONCRETE FILLET WITH NO CURB.

B 43.5-SY - 6" REINFORCED CONCRETE VALLEY GUTTER, 19.5' LENGTH.

ACORN LANE INTERSECTION GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10714136.19	17563256.13	2800.38
2	FG	10714141.30	1753275.81	2800.31
3	FG	10714143.75	1753285.25	2800.27
4	FG	10714146.19	1753294.69	2800.25
5	FG	10714151.30	1753314.37	2800.21
6	CL	10714119.74	175260.39	2800.72
7	CL	10714124.84	1753280.08	2800.65
8	CL	10714127.29	1753289.52	2800.61
9	CL	10714129.74	1753298.96	2800.59
10	CL	10714134.84	1753318.64	2800.55
11	FG	10714101.43	1753265.49	2800.37
12	FG	10714103.37	1753264.99	2800.38
13	FG	10714108.39	1753284.35	2800.31
14	CL	10714110.84	1753293.79	2800.27
15	FG	10714113.28	1753303.22	2800.25
16	FG	10714118.30	1753322.58	2800.21
17	FG	10714116.37	1753323.08	2800.20
18	FG	10714088.53	1753287.43	2800.14
19	FG	10714089.03	1753289.37	2800.14
20	CL	10714091.48	1753298.81	2800.11
21	FG	10714093.92	1753308.24	2800.02
22	FG	10714094.43	1753310.18	2800.02
23	EG	10714060.07	1753296.56	2799.94
24	EG CL	10714062.35	1753305.90	2799.92
25	EG	10714064.79	1753315.20	2799.76

EG EXISTING GRADE
EG CL EXISTING CENTERLINE GRADE
FG FINISH GRADE
FL FLOWLINE
CL CENTERLINE FINISH GRADE
CL FL CENTERLINE FLOWLINE

PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT

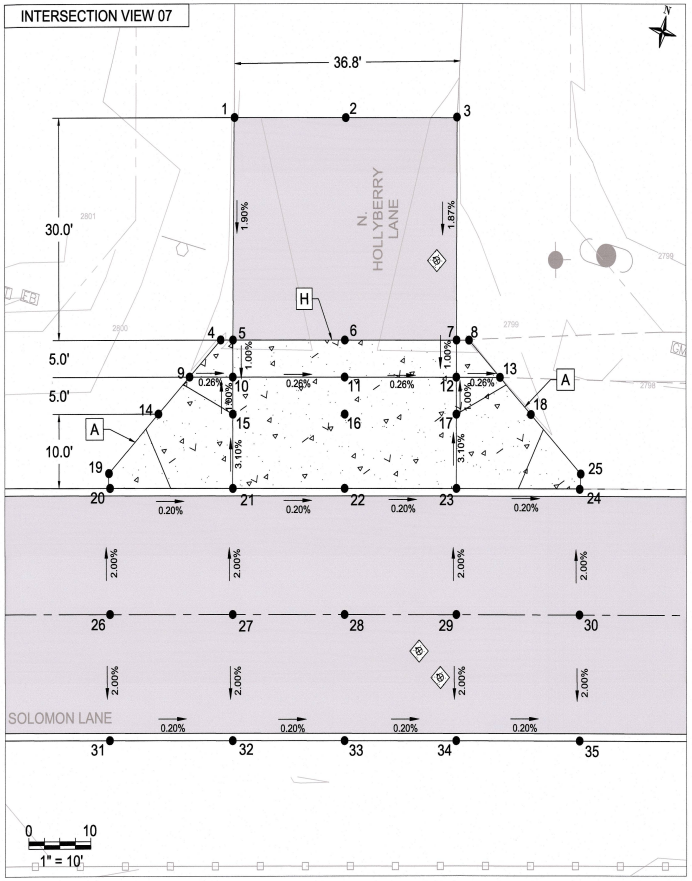
INTERSECTION PLAN 6 OF 8

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31, 2022

30
OF 64

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INTERSECTION VIEW 07



INTERSECTION KEYED NOTES:

A 26.5-SY - 6" REINFORCE CONCRETE FILLET WITH NO CURB.

H 80.0-SY - 6" REINFORCED CONCRETE VALLEY GUTTER, 36.0' LENGTH.

N HOLLYBERRY LANE INTERSECTION GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10714290.13	1753650.53	2799.27
2	EG CL	10714294.63	1753667.92	2799.27
3	EG	10714299.06	1753685.32	2799.16
4	FG	10714260.54	1753655.94	2798.70
5	FG	10714261.05	1753657.88	2798.70
6	CL	10714265.56	1753675.30	2799.10
7	FG	10714270.08	1753692.73	2798.60
8	FG	10714270.59	1735694.66	2798.60
9	FL	10714254.45	1753652.36	2799.15
10	FL	10714256.21	1753659.14	2799.14
11	CL FL	10714260.72	1753676.56	2799.09
12	FL	10714265.24	1753693.98	2799.04
13	FL	10714267.00	1753700.76	2799.03
14	FG	10714248.35	1753648.78	2799.22
15	FG	10714251.37	1753660.39	2799.19
16	CL	10714255.88	1753677.81	2799.14
17	FG	10714260.40	1753695.24	2799.09
18	FG	10714263.42	1753706.85	2799.06
19	FG	10714238.60	1753643.04	2799.51
20	FG	10714236.67	1753643.54	2799.53
21	FG	10714241.69	1753662.90	2799.49
22	CL	10714246.21	1753680.33	2799.45
23	FG	10714250.72	1753697.75	2799.41
24	FG	10714255.70	1753716.93	2799.37
25	FG	10714257.68	1753716.61	2799.35
26	CL	10714220.26	1753647.99	2799.87
27	CL	10714225.23	1753667.17	2799.83
28	CL	10714229.75	1753684.59	2799.79
29	CL	10714234.27	1753702.02	2799.75
30	CL	10714239.24	1753721.19	2799.71
31	FG	10714203.80	1753652.26	2799.53
32	FG	10714208.78	1753671.44	2799.49
33	FG	10714213.29	1753688.86	2799.45
34	FG	10714217.81	1753706.28	2799.41
35	FG	10714222.79	1753725.46	2799.37

EG EXISTING GRADE
EG CL EXISTING CENTERLINE GRADE
FG FINISH GRADE
FL FLOWLINE
CL CENTERLINE FINISH GRADE
CL FL CENTERLINE FLOWLINE

PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

811 Know what's below. Call before you dig.

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DRAWN/DESIGNED: PAK
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APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT

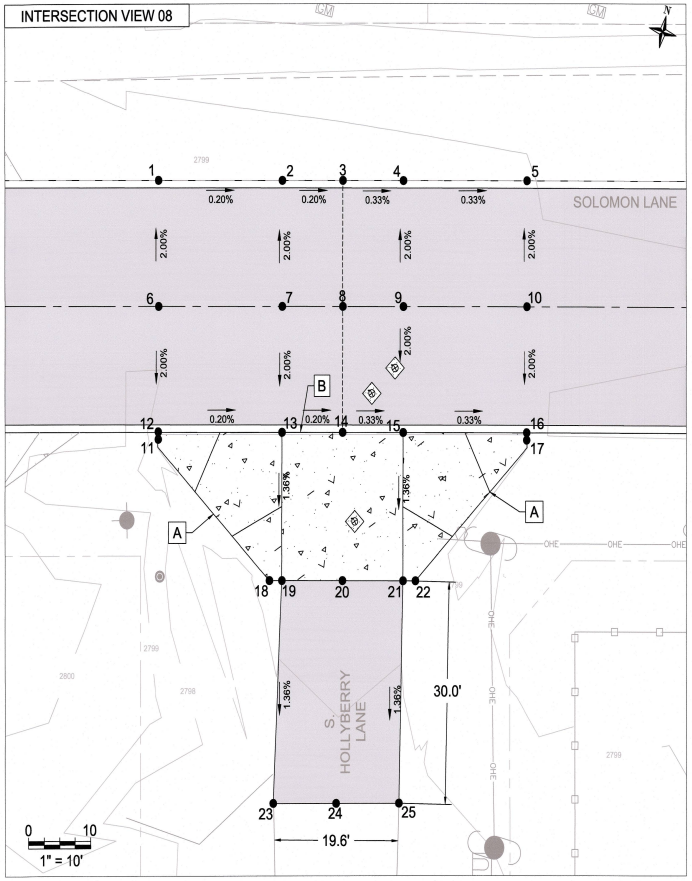
INTERSECTION PLAN
7 OF 8

STATE OF TEXAS
05/31/2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

31
OF 64

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INTERSECTION VIEW 08



INTERSECTION KEYED NOTES:

A 26.5-SY - 6" REINFORCE CONCRETE FILLET WITH NO CURB.

B 43.5-SY - 6" REINFORCED CONCRETE VALLEY GUTTER, 19.5' LENGTH.

S HOLLYBERRY LANE INTERSECTION GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10714294.78	1753867.63	2799.06
2	FG	10714299.78	1753886.91	2799.02
3	FG	10714302.23	1753896.35	2799.00
4	FG	10714304.68	1753905.79	2798.97
5	FG	10714369.68	1753925.07	2798.90
6	CL	10714278.33	1753871.90	2799.40
7	CL	10714283.33	1753891.18	2799.36
8	CL	10714285.77	1753900.62	2799.34
9	CL	10714288.22	1753910.06	2799.31
10	CL	10714293.22	1753929.34	2799.24
11	FG	10714259.91	1753876.59	2799.04
12	FG	10714261.87	1753876.17	2799.06
13	FG	10714266.87	1753895.45	2799.02
14	CL	10714269.32	1753904.89	2799.00
15	FG	10714271.77	1753914.32	2798.97
16	FG	10714276.79	1753933.68	2798.90
17	FG	10714274.85	1753934.19	2798.88
18	FG	10714247.01	1753898.53	2798.15
19	FG	10714247.51	1753900.47	2798.15
20	CL	10714249.96	1753909.91	2798.12
21	FG	10714252.41	1753919.34	2798.10
22	FG	10714252.91	1753921.28	2798.10
23	EG	10714218.45	1753906.65	2797.74
24	EG CL	10714220.67	1753916.51	2797.69
25	EG	10714223.23	1753926.29	2797.69

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

PAVING NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT, VALLEY GUTTERS, AND FILLETS ARE TO BE FIBER REINFORCED PER CITY DETAILS.

IV) SEAL ALL CONCRETE PAVEMENT JOINTS WITH TXDOT DMS-6310 SL-2 SEALANT OR CITY APPROVED EQUAL.

V) ALL FILLET LENGTH AND WIDTH ARE 20.0' UNLESS OTHERWISE NOTED.

VI) ALL VALLEY GUTTERS ARE 20.0' WIDTH UNLESS OTHERWISE NOTED.

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VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT

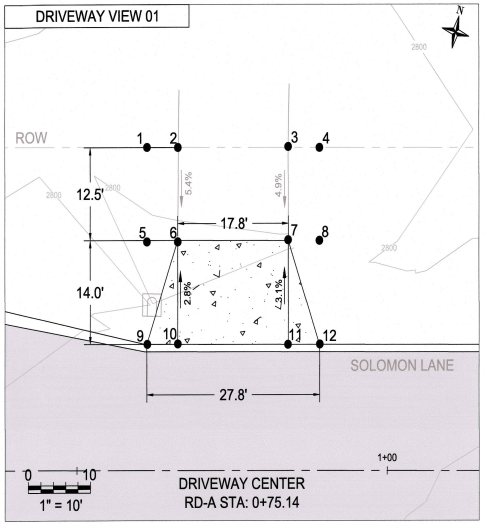
INTERSECTION PLAN 8 OF 8

STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

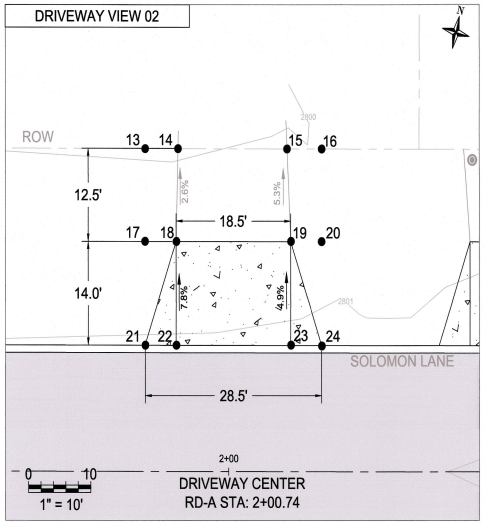
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OF 64

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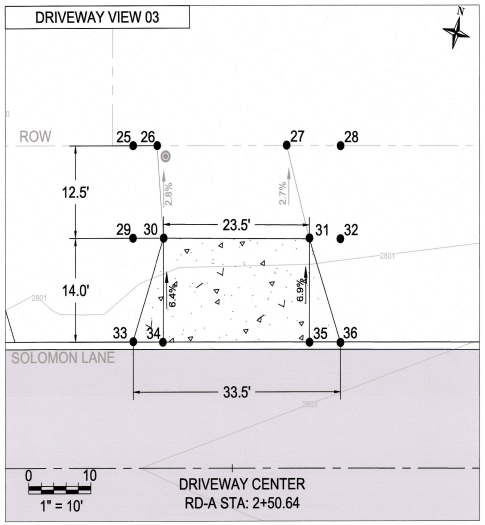
DRIVEWAY VIEW 01



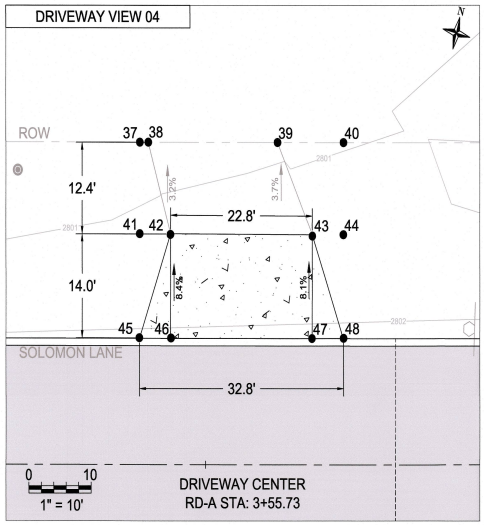
DRIVEWAY VIEW 02



DRIVEWAY VIEW 03



DRIVEWAY VIEW 04



DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 01 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10713238.01	1749693.51	2800.48
2	EG	10713239.41	1749698.40	2800.53
3	EG	10713243.87	1749715.53	2800.51
4	EG	10713245.01	1749720.43	2800.42
5	EG	10713225.89	1749696.66	2799.93
6	EG	10713227.14	1749701.49	2799.86
7	EG	10713231.63	1749718.74	2799.96
8	EG	10713232.89	1749723.58	2800.17
9	FG	10713212.34	1749700.18	2800.16
10	FG	10713213.60	1749705.02	2800.25
11	FG	10713218.09	1749722.26	2800.40
12	FG	10713219.35	1749727.10	2800.45

DRIVEWAY 02 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	EG	10713269.53	1749814.75	2799.96
14	EG	10713270.86	1749819.87	2799.96
15	EG	10713275.28	1749836.89	2800.16
16	EG	10713276.69	1749842.31	2800.03
17	EG	10713257.45	1749817.89	2800.26
18	EG	10713258.71	1749822.72	2800.28
19	EG	10713263.36	1749840.62	2800.82
20	EG	10713264.62	1749845.45	2800.62
21	FG	10713243.90	1749821.41	2801.35
22	FG	10713245.16	1749826.25	2801.38
23	FG	10713249.82	1749844.13	2801.50
24	FG	10713251.08	1749848.97	2801.53

DRIVEWAY 03 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
25	EG	10713281.46	1749860.66	2800.24
26	EG	10713282.45	1749864.44	2800.43
27	EG	10713287.75	1749884.62	2800.52
28	EG	10713289.88	1749893.04	2800.54
29	EG	10713269.41	1749863.80	2800.54
30	EG	10713270.65	1749868.58	2800.78
31	EG	10713276.48	1749891.35	2800.86
32	EG	10713277.74	1749.896.20	2800.87
33	FG	10713255.86	1749867.32	2801.65
34	FG	10713257.10	1749872.10	2801.68
35	FG	10713263.02	1749894.86	2801.83
36	FG	10713264.28	1749899.70	2801.86

DRIVEWAY 04 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
37	EG	10713307.97	1749962.64	2800.76
38	EG	10713308.31	1749963.96	2800.78
39	EG	10713313.55	1749984.14	2800.90
40	EG	10713316.23	1749994.43	2800.96
41	EG	10713296.04	1749965.74	2801.11
42	EG	10713297.30	1749970.57	2801.17
43	EG	10713302.97	1749992.71	2801.36
44	EG	10713304.23	1749997.55	2801.36
45	FG	10713282.41	1749969.28	2802.32
46	FG	10713283.67	1749974.12	2802.35
47	FG	10713289.43	1749996.23	2802.50
48	FG	10713290.69	1750001.07	2802.53

Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:10
HORIZ. SCALE:
PROJECT NO.: BPU19-05
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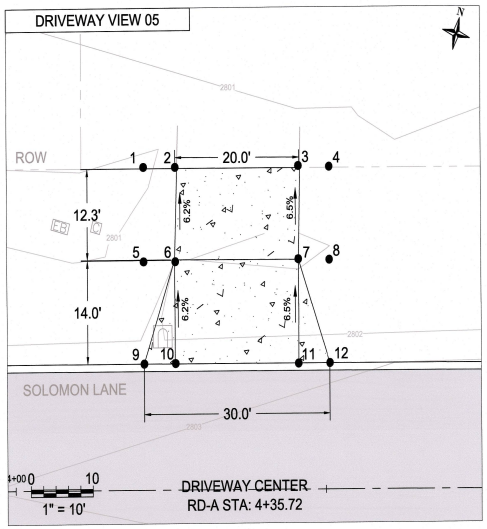
MIDLAND Engineering Services

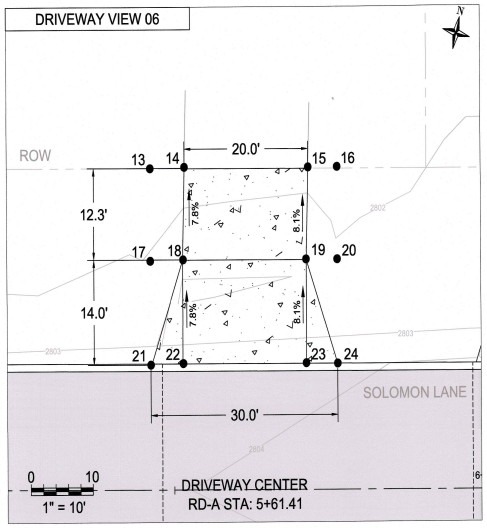
SOLOMON LANE PAVING
BOND PROJECT
DRIVEWAY PLAN
1 OF 16

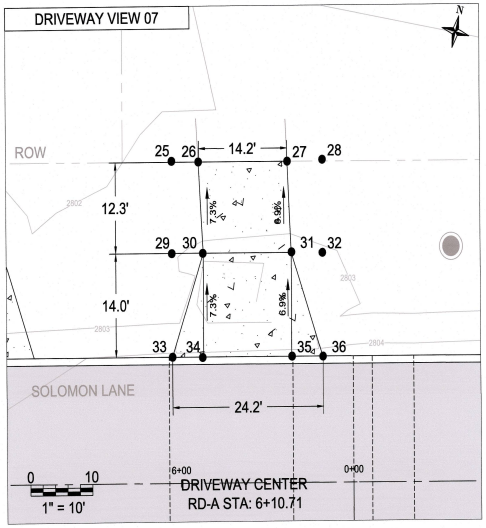
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
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MAY 31, 2022

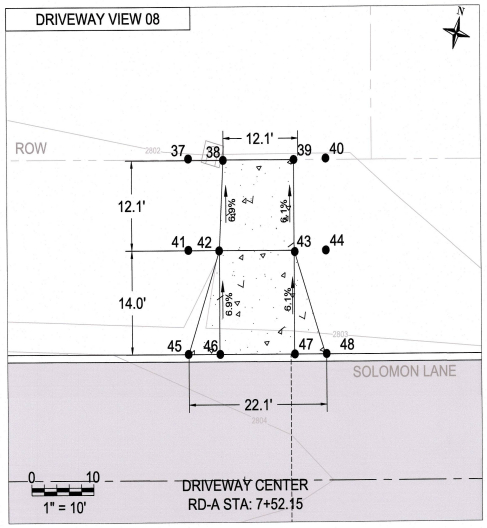
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OF 64

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DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 05 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10713328.46	1750041.48	2800.91
2	EG	10713329.80	1750046.65	2801.20
3	EG	10713334.78	1750065.82	2801.22
4	EG	10713335.99	1750070.45	2801.18
5	FG	10713316.53	1750044.59	2801.12
6	FG	10713317.77	1750049.38	2801.96
7	FG	10713322.76	1750068.72	2802.31
8	FG	10713324.02	1750073.57	2801.33
9	FG	10713302.94	1750048.12	2802.79
10	FG	10713304.20	1750052.95	2802.82
11	FG	10713309.22	1750072.24	2802.92
12	FG	10713310.48	1750077.08	2802.94

DRIVEWAY 06 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	EG	10713360.06	1750163.08	2801.54
14	EG	10713361.39	1750168.20	2801.59
15	EG	10713366.41	1750187.51	2801.73
16	EG	10713367.59	1750192.05	2801.75
17	EG	10713348.14	1750166.18	2801.70
18	FG	10713349.39	1750171.01	2802.55
19	FG	10713354.42	1750190.31	2802.73
20	EG	10713355.67	1750195.15	2802.14
21	FG	10713334.60	1750169.70	2803.60
22	FG	10713335.86	1750174.54	2803.64
23	FG	10713340.88	1750193.83	2803.86
24	FG	10713342.14	1750198.67	2803.91

DRIVEWAY 07 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
25	EG	10713373.21	1750213.68	2802.15
26	EG	10713374.28	1750217.77	2802.23
27	EG	10713377.89	1750231.65	2802.33
28	EG	10713379.30	1750237.10	2802.30
29	EG	10713361.31	1750216.77	2802.41
30	FG	10713362.56	1750221.60	2803.12
31	FG	10713366.14	1750235.35	2803.18
32	EG	10713367.40	1750240.19	2802.70
33	FG	10713347.77	1750220.29	2804.31
34	FG	10713349.03	1750225.13	2804.14
35	FG	10713352.65	1750239.04	2804.15
36	FG	10713353.87	1750243.71	2804.44

DRIVEWAY 08 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
37	EG	10713409.04	1750351.53	2802.06
38	EG	10713410.46	1750356.98	2802.06
39	EG	10713413.33	1750368.01	2802.17
40	EG	10713414.59	1750372.87	2802.09
41	EG	10713397.20	1750354.61	2802.41
42	FG	10713398.45	1750359.45	2802.90
43	FG	10713401.49	1750371.11	2802.91
44	EG	10713402.75	1750375.95	2802.37
45	FG	10713383.66	1750358.13	2803.91
46	FG	10713384.92	1750362.97	2803.87
47	FG	10713387.96	1750374.63	2803.77
48	FG	10713389.22	1750379.46	2803.68

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
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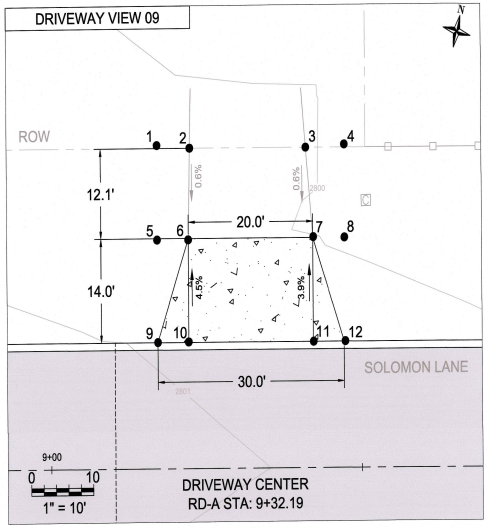
MIDLAND Engineering Services

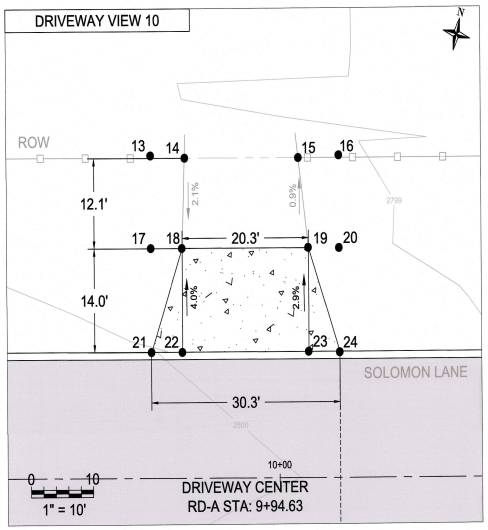
SOLOMON LANE PAVING
BOND PROJECT
DRIVEWAY PLAN
2 OF 16

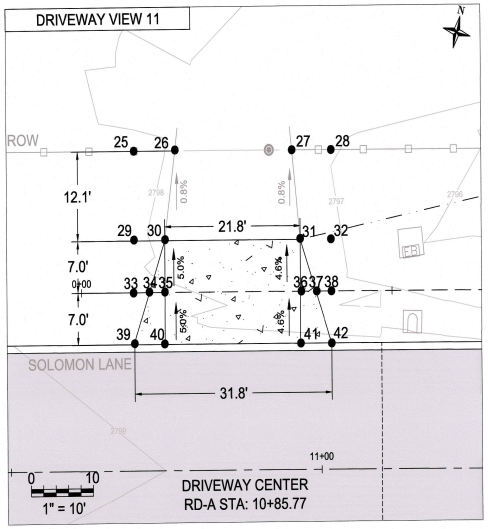
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
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PROFESSIONAL ENGINEER

34
OF 64

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Paving & Util\03 DWG\93.1 DWG\Plans PVNG\C12 DRWY.dwg May 31, 2022 - 8:50am pbingston







DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 09 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10713453.34	1750521.95	2800.30
2	EG	10713454.65	1750527.00	2800.29
3	EG	10713459.35	1750545.07	2800.08
4	EG	10713460.88	1750550.97	2799.73
5	EG	10713441.56	1750525.01	2800.23
6	EG	10713442.81	1750529.81	2800.22
7	EG	10713447.86	1750549.20	2800.01
8	EG	10713449.12	1750554.03	2799.92
9	FG	10713428.03	1750528.52	2800.93
10	FG	10713429.29	1750533.34	2800.85
11	FG	10713434.33	1750552.72	2800.56
12	FG	10713435.57	1750557.56	2800.49

DRIVEWAY 10 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	EG	10713469.00	1750582.22	2799.68
14	EG	10713470.36	1750587.44	2799.63
15	EG	10713474.96	1750605.16	2799.13
16	EG	10713476.62	1750611.54	2799.06
17	EG	10713457.25	1750585.27	2799.58
18	EG	10713458.51	1750590.10	2799.38
19	EG	10713463.63	1750609.77	2799.24
20	EG	10713464.88	1750614.60	2799.16
21	FG	10713443.73	1750588.79	2800.01
22	FG	10713444.99	1750593.62	2799.94
23	FG	10713450.11	1750613.29	2799.64
24	FG	10713451.36	1750618.11	2799.57

DRIVEWAY 11 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
25	EG	10713491.74	1750669.71	2798.10
26	EG	10713493.42	1750676.15	2797.86
27	EG	10713498.15	1750694.36	2797.62
28	EG	10713499.74	1750700.49	2797.09
29	EG	10713480.03	1750672.76	2798.05
30	EG	10713481.29	1750677.59	2797.96
31	EG	10713486.78	1750698.68	2797.72
32	EG	10713488.98	1750703.28	2797.17
33	FG	10713473.28	1750674.51	2798.15
34	FG	10713473.91	1750676.93	2798.11
35	FG	10713474.54	1750679.34	2798.07
36	FG	10713480.02	1750700.44	2797.74
37	FG	10713480.66	2750702.85	2797.69
38	FG	10713481.29	1750705.27	2797.56
39	FG	10713466.51	1750676.27	2798.73
40	FG	10713467.77	1750681.11	2798.66
41	FG	10713473.26	1750702.20	2798.36
42	FG	10713474.52	1750707.03	2798.29

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

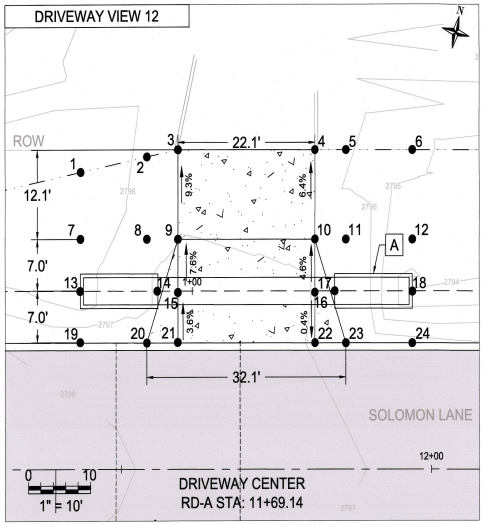
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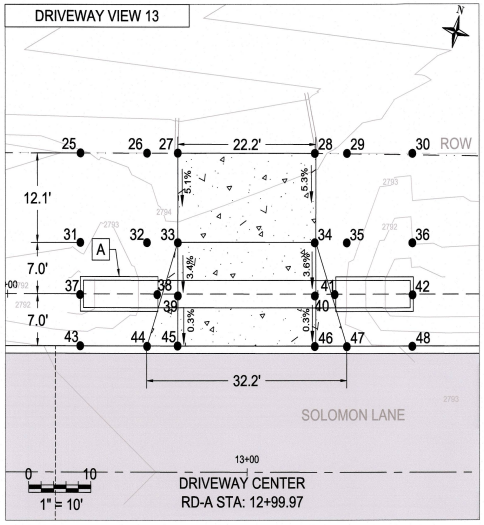
SOLOMON LANE PAVING
BOND PROJECT
DRIVEWAY PLAN
3 OF 16

STATE OF TEXAS
MAY 31, 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

35
OF 64

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DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

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GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY KEYED NOTES:

A SEE SHEET 49 FOR STORM DRAIN PROFILE.

DRIVEWAY 12 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10713507.28	1750741.62	2795.33
2	EG	10713511.99	1750751.47	2795.59
3	EG	10713514.17	1750756.06	2795.80
4	EG	10713519.73	1750777.43	2795.89
5	EG	10713520.99	1750782.28	2795.66
6	EG	10713523.68	1750792.64	2795.14
7	FG	10713498.56	1750743.90	2795.64
8	FG	10713501.25	1750754.26	2796.50
9	FG	10713502.51	1750759.09	2796.93
10	FG	10713508.07	1750780.46	2796.66
11	FG	10713509.33	1750785.31	2796.49
12	FG	10713512.02	1750795.67	2794.28
13	FL	10713491.81	1750745.65	2796.60
14	FG	10713494.96	1750757.75	2797.33
	FL	--------	--------	2795.90
15	FG	10713495.76	1750760.85	2797.46
16	FG	10713501.33	1750782.22	2796.98
17	FG	10713502.15	1750785.37	2796.89
	FL	--------	--------	2794.63
18	FL	10713505.29	1750797.43	2793.93
19	FG	10713485.03	1750747.41	2797.92
20	FG	10713487.73	1750757.78	2797.80
21	FG	10713488.99	1750762.61	2797.71
22	FG	10713494.55	1750783.98	2796.95
23	FG	10713495.81	1750788.82	2796.78
24	FG	10713498.52	1750799.19	2796.41

DRIVEWAY 13 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
25	EG	10713542.86	1750866.45	2793.95
26	EG	10713545.56	1750876.81	2794.32
27	EG	10713546.82	1750881.64	2794.48
28	EG	10713552.41	1750903.17	2794.12
29	EG	10713553.70	1750908.36	2793.71
30	EG	10713556.17	1750918.43	2793.54
31	FG	10713531.25	1750869.46	2793.23
32	FG	10713533.95	1750879.83	2793.47
33	FG	10713535.20	1750884.66	2793.86
34	FG	10713540.81	1750906.19	2793.49
35	FG	10713542.11	1750911.21	2793.17
36	FG	10713544.76	1750921.39	2792.08
37	FL	10713524.49	1750871.22	2791.67
38	FG	10713527.65	1750883.31	2793.45
	FL	--------	--------	2791.36
39	FG	10713528.46	1750886.42	2793.62
40	FG	10713534.07	1750907.94	2793.24
41	FG	10713534.88	1750911.05	2793.19
	FL	--------	--------	2790.79
42	FL	10713538.03	1750923.15	2790.48
43	FG	10713517.73	1750872.98	2793.86
44	FG	10713520.43	1750883.34	2793.68
45	FG	10713521.69	1750888.18	2793.60
46	FG	10713527.29	1750909.71	2793.22
47	FG	10713528.55	1750914.55	2793.14
48	FG	10713531.25	1750924.92	2792.96

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

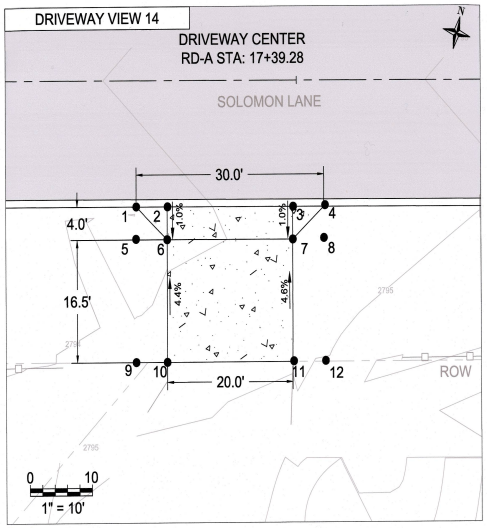
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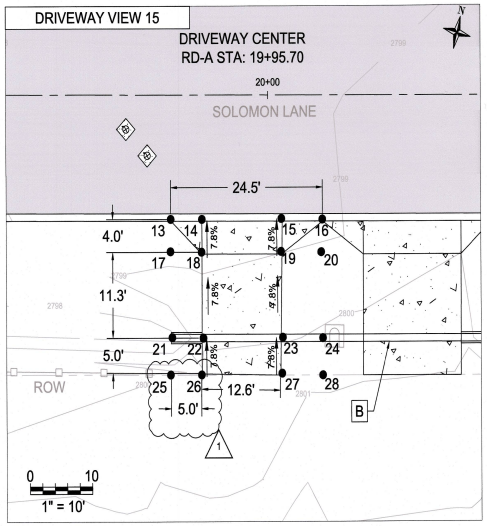
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BOND PROJECT
DRIVEWAY PLAN
4 OF 16

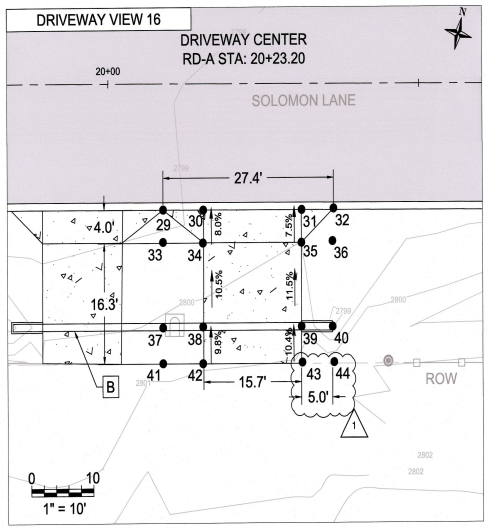
STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

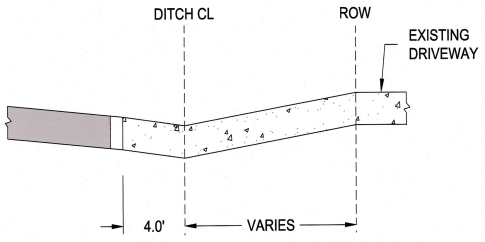
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DRIVEWAY 14 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY KEYED NOTES:

B 41.6' - DRIVEWAY CULVERT CROSSING DETAIL D10, SHEET 61.

DRIVEWAY 14 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10713598.45	1751318.02	2793.76
2	FG	10713599.70	1751322.86	2793.86
3	FG	10713604.77	1751342.42	2794.25
4	FG	10713606.03	1751347.26	2794.35
5	FL	10713594.16	1751319.14	2793.73
6	FL	10713595.41	1751323.98	2793.82
7	FL	10713600.48	1751343.53	2794.21
8	FL	10713601.74	1751348.39	2794.32
9	EG	10713578.14	1751323.29	2794.17
10	EG	10713579.41	1751328.13	2794.55
11	EG	10713584.54	1751347.66	2794.96
12	EG	10713585.82	1751352.57	2795.17

DRIVEWAY 15 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	FG	10713663.77	1751569.92	2798.40
14	FG	10713665.03	1751574.76	2798.48
15	FG	10713668.27	1751587.25	2798.70
16	FG	10713669.90	1751593.56	2798.78
17	FG	10713659.48	1751571.03	2798.23
18	FG	10713660.74	1751575.87	2798.79
19	FG	10713663.94	1751588.23	2799.01
20	FG	10713665.61	1751594.67	2799.13
21	FL	10713648.53	1751573.88	2797.75
22	FG	10713649.79	1751578.71	2799.67
	FL	-------	-------	2797.90
23	FG	10713652.98	1751591.00	2799.88
	FL	-------	-------	2798.29
24	FL	10713654.67	1751597.51	2800.13
25	EG	10713643.69	1751575.13	2800.00
26	EG	10713645.11	1751579.93	2800.06
27	EG	10713648.12	1751592.19	2800.27
28	EG	10713649.83	1751598.77	2800.54

DRIVEWAY 16 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
29	FG	10713669.90	1751593.56	2798.78
30	FG	10713671.54	1751599.85	2798.86
31	FG	10713675.48	1751615.08	2799.75
32	FG	10713676.74	1751619.92	2799.83
33	FG	10713665.61	1751594.67	2799.13
34	FG	17013667.25	1751600.97	2799.18
35	FG	10713671.19	1751616.19	2799.45
36	FG	10713672.45	1751621.03	2799.62
37	FL	10713654.67	1751597.51	2800.13
38	FG	10713656.30	1751603.81	2800.37
	FL	-------	-------	2798.39
39	FG	10713660.25	1751619.03	2800.75
	FL	-------	-------	2798.87
40	FL	10713661.51	1751623.87	2799.03
41	EG	10713649.83	1751598.77	2800.54
42	EG	10713651.46	1751605.06	2800.86
43	EG	10713655.41	1751620.28	2801.07
44	EG	10713656.67	1751625.12	2801.07

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description
01	6/17/22	PAK	ADD DIMENSIONS

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-06
DATE: MAY 2022

MIDLAND Engineering Services

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BOND PROJECT
DRIVEWAY PLAN
5 OF 16

STATE OF TEXAS
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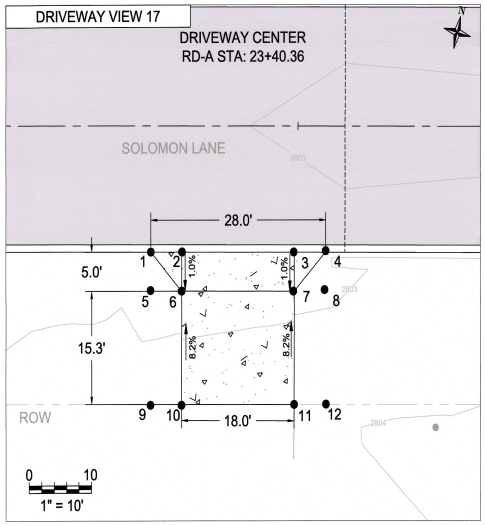
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OF 64

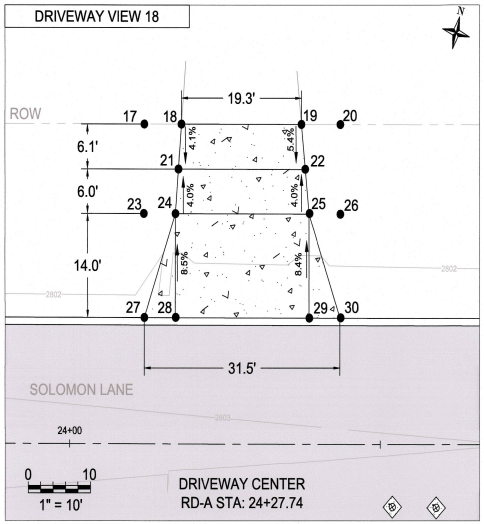
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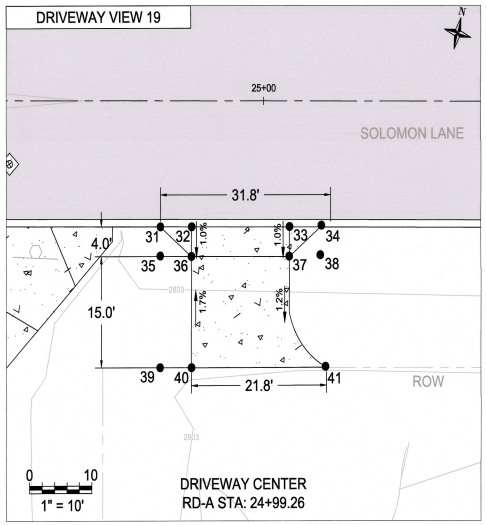
PACKET

4.353

August 9, 2022







DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

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IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 17 GRADE POINT TABLE

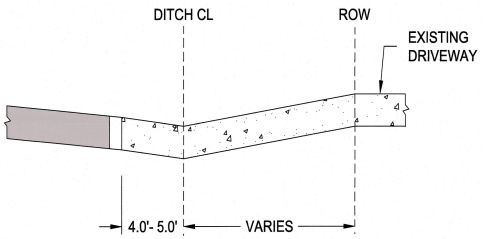
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10713749.60	1751900.86	2802.48
2	FG	10713750.85	1751905.70	2802.54
3	FG	10713755.40	1751923.25	2802.74
4	FG	10713756.66	1751928.09	2802.79
5	FL	10713744.50	1751902.18	2802.36
6	FL	10713745.76	1751907.02	2802.43
7	FL	10713750.32	1751924.56	2802.69
8	FL	10713751.58	1751929.41	2802.84
9	FG	10713739.66	1751903.44	2802.89
10	FG	10713740.92	1751908.27	2802.84
11	FG	10713745.48	1751925.82	2803.06
12	FG	10713746.74	1751930.67	2803.18
13	EG	10713729.73	1751906.03	2803.62
14	EG	10713730.99	1751910.85	2803.68
15	EG	10713735.56	1751928.39	2803.82
16	EG	10713736.82	1751933.25	2803.85

DRIVEWAY 18 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
17	EG	10713829.25	1751968.71	2801.49
18	EG	10713830.75	1751974.48	2801.56
19	EG	10713835.61	1751993.18	2801.62
20	EG	10713837.18	1751999.22	2801.58
21	FG	10713824.75	1751975.54	2801.31
22	FG	10713829.88	1751995.32	2801.29
23	FG	10713817.56	1751971.74	2801.35
24	FG	10713818.83	1751976.59	2801.55
25	FG	10713824.23	1751997.43	2801.53
26	FG	10713825.48	1752002.26	2801.30
27	FG	10713804.02	1751975.27	2802.75
28	FG	10713805.27	1751980.11	2802.74
29	FG	10713810.68	1752000.94	2802.71
30	FG	10713811.93	1752005.78	2802.70

DRIVEWAY 19 GRADE POINT TABLE

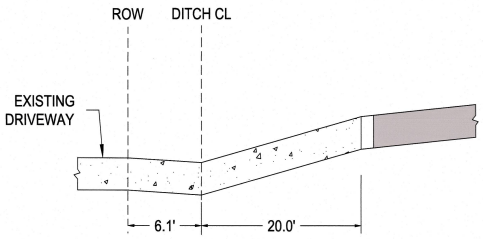
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
31	FG	10713789.03	1752052.89	2802.64
32	FG	10713790.28	1752057.73	2802.63
33	FG	10713794.24	1752073.00	2802.61
34	FG	10713795.50	1752077.84	2802.60
35	FL	10713785.16	1752053.90	2802.60
36	FL	10713786.41	1752058.74	2802.59
37	FL	10713790.37	1752074.01	2802.57
38	FL	10713791.62	1752078.85	2802.56
39	EG	10713770.63	1752057.69	2803.39
40	EG	10713771.89	1752062.52	2802.85
41	EG	10713777.44	1752083.56	2802.39



DRIVEWAY 17 & 19 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 18 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

PACKET

August 9, 2022

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

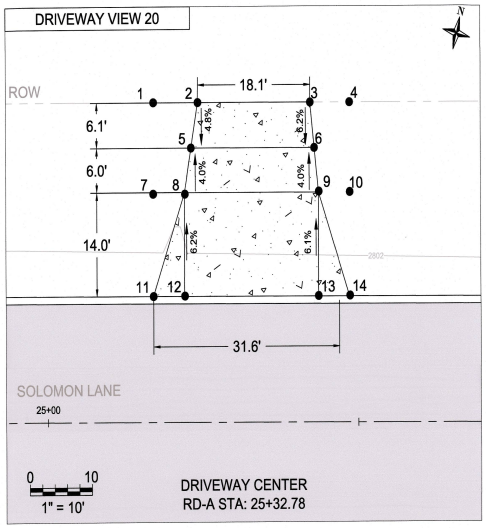
MIDLAND Engineering Services

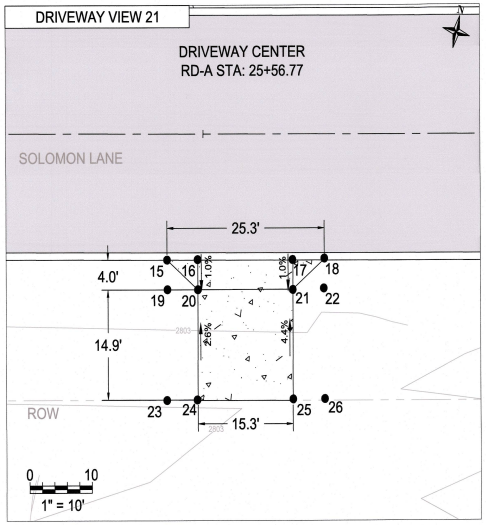
SOLOMON LANE PAVING
BOND PROJECT
DRIVEWAY PLAN
6 OF 16

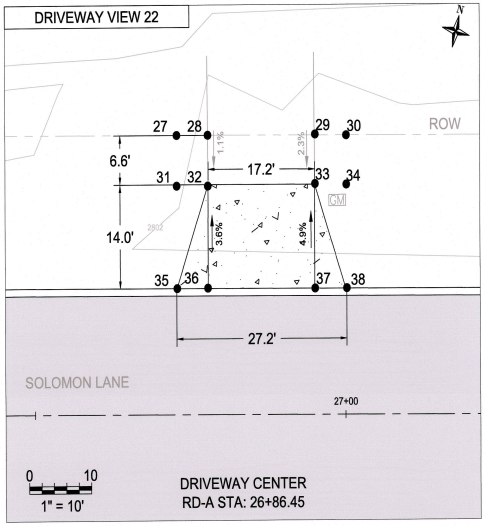
STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

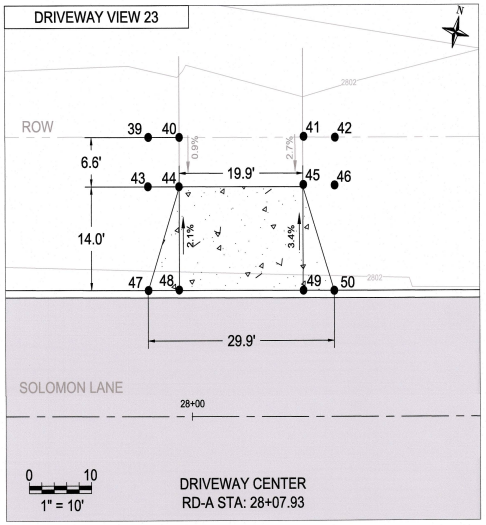
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OF 64

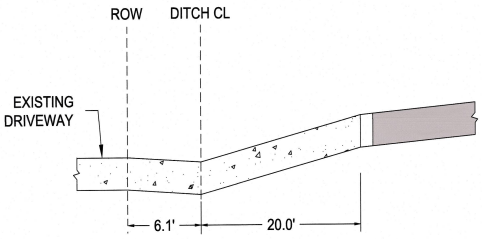
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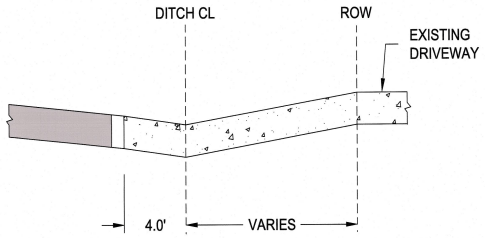




DRIVEWAY 20 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 21 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 20 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10713855.67	1752070.35	2801.73
2	EG	10713857.47	1752077.25	2801.76
3	EG	10713862.01	1752094.75	2801.83
4	EG	10713863.61	1752100.89	2801.77
5	FG	10713851.26	1752077.76	2801.47
6	FG	10713856.24	1752096.96	2801.45
7	FG	10713843.93	1752073.40	2801.48
8	FG	10713845.19	1752078.25	2801.71
9	FG	10713850.60	1752099.12	2801.69
10	FG	10713851.86	1752103.95	2801.34
11	FG	10713830.38	1752076.92	2802.59
12	FG	10713831.64	1752081.76	2802.58
13	FG	10713837.05	1752102.63	2802.55
14	FG	10713838.30	1752107.47	2802.54

DRIVEWAY 21 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
15	FG	10713804.28	1752111.72	2802.55
16	FG	10713805.53	1752116.55	2802.54
17	FG	10713809.37	1752131.33	2802.52
18	FG	10713810.60	1752136.08	2802.51
19	FL	10713800.41	1752112.73	2802.51
20	FL	10713801.68	1752117.55	2802.50
21	FL	10713805.56	1752132.31	2802.48
22	FL	10713806.38	1752137.07	2802.75
23	EG	10713785.96	1752116.50	2802.81
24	EG	10713787.23	1752121.31	2802.89
25	EG	10713791.13	1752136.07	2803.13
26	EG	10713792.31	1752140.85	2803.20

DRIVEWAY 22 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
27	EG	10713889.50	1752222.62	2802.09
28	EG	10713890.74	1752227.39	2801.92
29	EG	10713895.05	1752244.02	2801.82
30	EG	10713896.32	1752248.91	2801.67
31	EG	10713883.06	1752224.29	2802.02
32	EG	10713884.32	1752229.13	2801.85
33	EG	10713888.62	1752245.74	2801.64
34	EG	10713889.88	1752250.58	2801.36
35	FG	10713869.51	1752227.80	2802.36
36	FG	10713870.77	1752232.64	2802.35
37	FG	10713875.07	1752249.25	2802.33
38	FG	10713876.33	1752254.09	2802.32

DRIVEWAY 23 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
39	EG	10713919.65	1752338.87	2801.92
40	EG	10713920.90	1752343.70	2801.93
41	EG	10713925.90	1752362.97	2801.84
42	EG	10713927.16	1752367.83	2801.81
43	EG	10713913.21	1752340.54	2801.86
44	EG	10713914.47	1752345.38	2801.87
45	EG	10713919.47	1752364.66	2801.66
46	EG	10713920.72	1752369.50	2801.62
47	FG	10713899.66	1752344.05	2802.18
48	FG	10713900.91	1752348.89	2802.17
49	FG	10713906.41	1752368.17	2802.14
50	FG	10713907.17	1752373.01	2802.14

811 Know what's below. Call before you dig.

Rev. No.	Description	Date	By

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:10
HORIZ. SCALE: BPU19-05
PROJECT NO.: MAY 2022
DATE:

MIDLAND Engineering Services

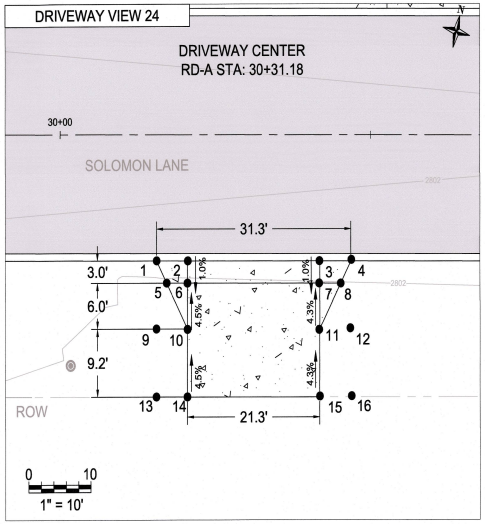
SOLOMON LANE PAVING BOND PROJECT
DRIVEWAY PLAN
7 OF 16

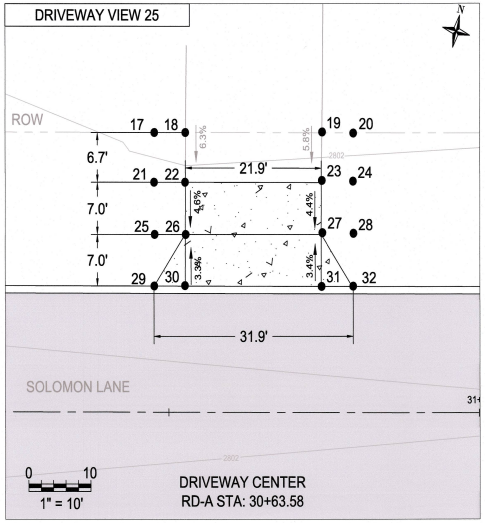
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31, 2022

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OF 64

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PACKET 4.355 August 9, 2022





DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

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GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 24 GRADE POINT TABLE

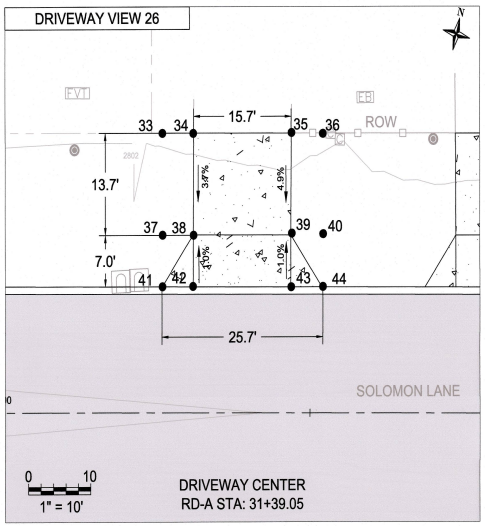
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10713922.62	1752568.02	2801.85
2	FG	10713923.87	1752572.86	2801.84
3	FG	10713929.22	1752593.48	2801.81
4	FG	10713930.48	1752598.32	2801.80
5	FL	10713920.12	1752570.36	2801.81
6	FL	10713920.97	1752573.62	2801.81
7	FL	10713926.32	1752594.23	2801.78
8	FL	10713927.16	1752597.49	2801.78
9	FG	10713913.74	1752570.34	2802.48
10	FG	10713915.00	1752575.17	2802.42
11	FG	10713920.36	1752595.78	2802.38
12	FG	10713921.62	1752600.63	2802.36
13	EG	10713904.86	1752572.65	2802.37
14	EG	10713906.12	1752577.47	2802.50
15	EG	10713911.49	1752598.08	2802.43
16	EG	10713912.76	1752602.94	2802.10

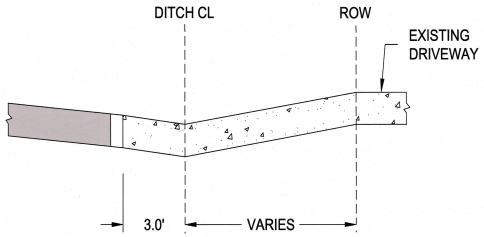
DRIVEWAY 25 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
17	EG	10713983.61	1752585.36	2802.16
18	EG	10713984.88	1752590.24	2802.30
19	EG	10713990.40	1752611.48	2802.19
20	EG	10713991.63	1752616.22	2802.13
21	EG	10713977.14	1752587.04	2801.79
22	EG	10713978.40	1752591.89	2801.88
23	EG	10713983.89	1752613.07	2801.83
24	EG	10713985.15	1752617.91	2801.76
25	FL	10713970.32	1752588.82	2801.40
26	FL	10713971.57	1752593.63	2801.56
27	FL	10713977.11	1752614.83	2801.52
28	FL	10713978.37	1752619.67	2801.51
29	FG	10713963.59	1752590.57	2801.80
30	FG	10713964.84	1752595.41	2801.79
31	FG	10713970.34	1752616.59	2801.76
32	FG	10713971.59	1752621.43	2801.75

DRIVEWAY 26 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
33	EG	10714003.37	1752661.40	2802.07
34	EG	10714004.65	1752666.30	2802.11
35	EG	10714008.60	1752681.51	2802.25
36	EG	10714009.84	1752686.27	2802.03
37	FL	10713990.08	1752664.85	2801.61
38	FL	10713991.34	1752669.69	2801.61
39	FL	10713995.28	1752684.89	2801.58
40	FL	10713996.54	1752689.73	2801.58
41	FG	10713983.31	1752666.61	2801.69
42	FG	10713984.57	1752671.45	2801.68
43	FG	10713988.51	1752686.65	2801.66
44	FG	10713989.76	1752691.49	2801.65

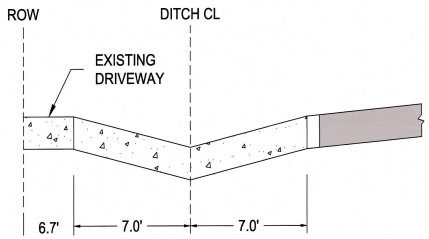




DRIVEWAY 24 CROSS SECTION

NOTES:

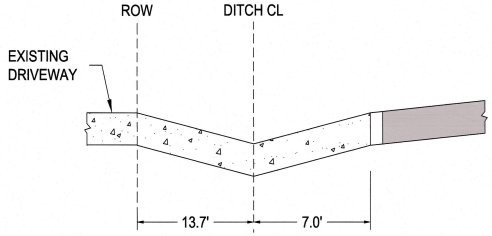
1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 25 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 26 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

PACKET 4.356

August 9, 2022

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

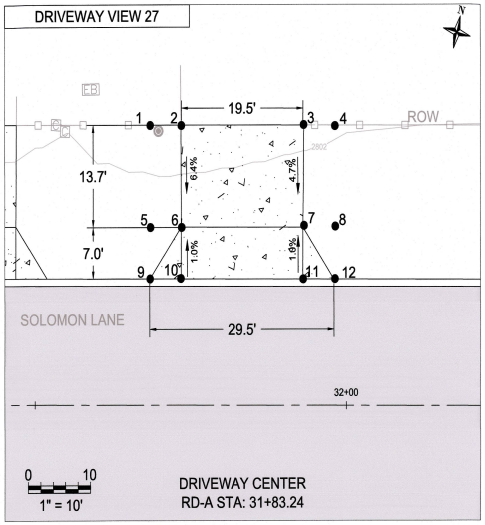
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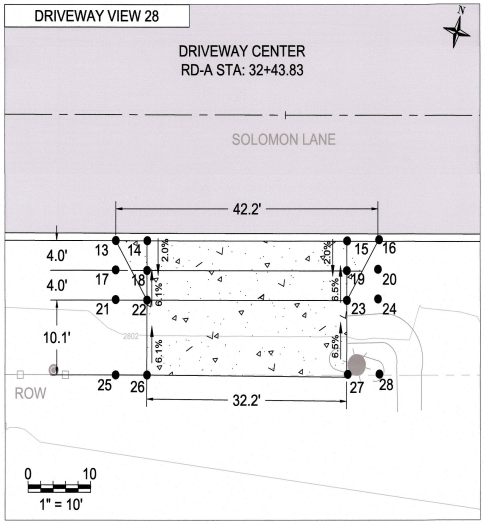
SOLOMON LANE PAVING
BOND PROJECT
DRIVEWAY PLAN
8 OF 16

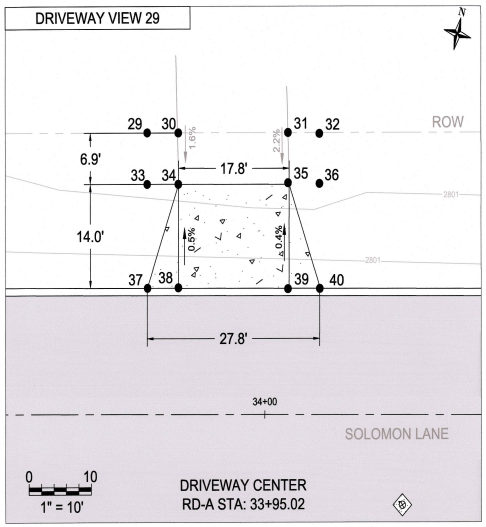
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JOSHUA C. FERGUSON
117692
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PROFESSIONAL ENGINEER

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DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 27 GRADE POINT TABLE

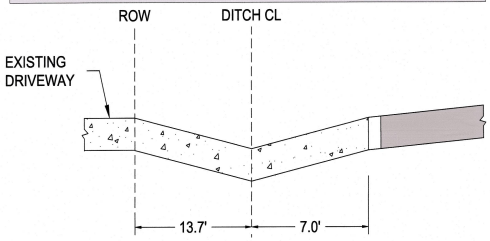
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10714014.01	1752702.32	2802.44
2	EG	10714015.25	1752707.10	2802.42
3	EG	10714020.21	1752726.18	2802.16
4	EG	10714021.43	1752730.88	2802.04
5	FL	10714000.70	1752705.78	2801.55
6	FL	10714001.96	1752710.62	2801.54
7	FL	10714006.86	1752729.51	2801.51
8	FL	10714008.11	1752734.34	2801.51
9	FG	10713993.93	1752707.54	2801.62
10	FG	10713995.18	1752712.38	2801.61
11	FG	10714000.09	1752731.27	2801.58
12	FG	10714001.33	1752736.31	2801.58

DRIVEWAY 28 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	FG	10713974.64	1752768.63	2801.54
14	FG	10713975.90	1752773.47	2801.53
15	FG	10713983.96	1752804.56	2801.49
16	FG	10713985.22	1752809.40	2801.48
17	FL	10713971.40	1752772.06	2801.45
18	FL	10713972.03	1752774.48	2801.45
19	FL	10713980.09	1752805.56	2801.41
20	FL	10713980.72	1752807.98	2801.41
21	FG	10713966.90	1752770.65	2801.46
22	FG	10713968.16	1752775.48	2801.45
23	FG	10713976.22	1752806.56	2801.41
24	FG	10713977.48	1752811.41	2801.40
25	EG	10713957.14	1752773.20	2802.37
26	EG	10713958.39	1752778.01	2802.31
27	EG	10713966.23	1752809.16	2802.33
28	EG	10713967.76	1752813.95	2802.31

DRIVEWAY 29 GRADE POINT TABLE

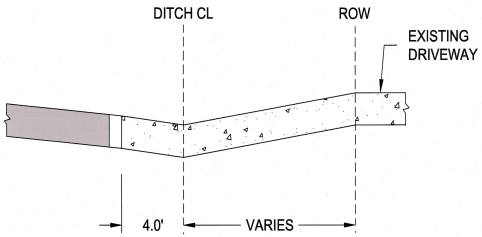
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
29	EG	10714067.54	1752908.09	2801.38
30	EG	10714068.77	1752912.80	2801.34
31	EG	10714073.27	1752929.97	2801.36
32	EG	10714074.57	1752934.95	2801.49
33	EG	10714060.84	1752909.85	2801.23
34	EG	10714062.12	1752914.71	2801.23
35	EG	10714066.58	1752931.91	2801.21
36	EG	10714067.83	1752936.72	2801.21
37	FG	10714047.31	1752913.39	2801.31
38	FG	10714048.56	1752918.23	2801.30
39	FG	10714053.02	1752935.43	2801.27
40	FG	10714054.28	1752940.27	2801.26



DRIVEWAY 27 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 28 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

BASKET 4.357

August 9, 2022

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

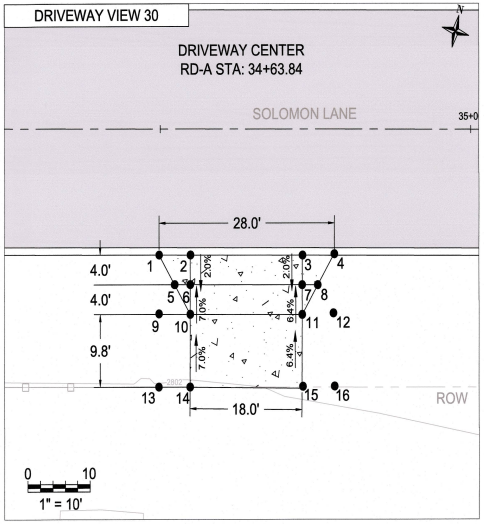
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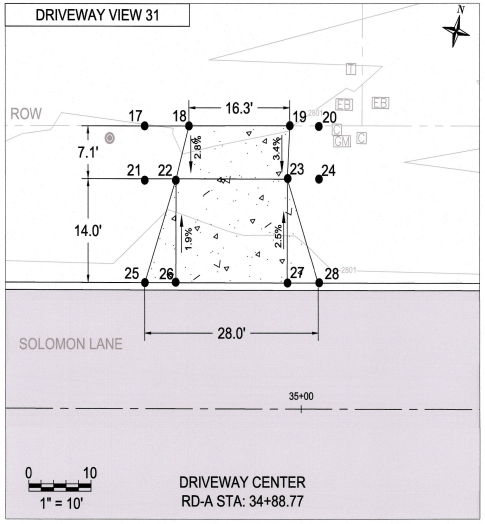
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DRIVEWAY PLAN
9 OF 16

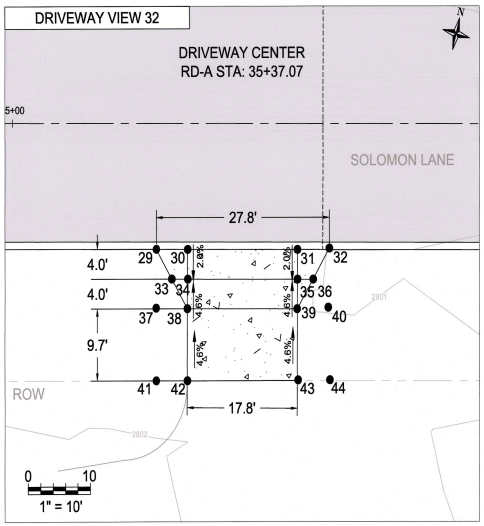
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117692
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PROFESSIONAL ENGINEER
MAY 31 2022

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OF 64

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DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

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GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 30 GRADE POINT TABLE

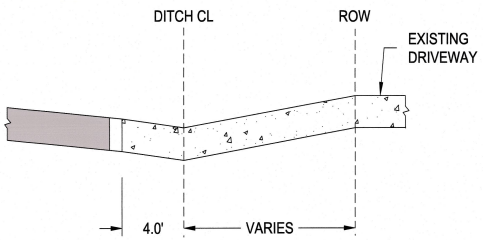
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10714031.64	1752988.40	2801.20
2	FG	10714032.89	1752993.24	2801.19
3	FG	10714037.42	1753010.70	2801.17
4	FG	10714038.68	1753015.54	2801.16
5	FL	10714028.39	1752991.83	2801.11
6	FL	10714029.02	1752994.25	2801.11
7	FL	10714033.35	1753011.71	2801.09
8	FL	10714034.18	1753014.13	2801.09
9	FG	10714023.89	1752990.42	2801.12
10	FG	10714025.15	1752995.25	2801.39
11	FG	10714029.68	1753012.71	2801.35
12	FG	10714030.94	1753017.56	2801.08
13	EG	10714014.41	1752992.89	2802.05
14	EG	10714015.66	1752997.71	2802.07
15	EG	10714020.07	1753015.21	2801.97
16	EG	10714027.48	1753020.03	2801.94

DRIVEWAY 31 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
17	EG	10714091.26	1752998.71	2801.06
18	EG	10714093.06	1753005.59	2801.10
19	EG	10714097.17	1753021.32	2801.02
20	EG	10714098.33	1753025.73	2800.82
21	FG	10714084.36	1753000.52	2800.94
22	FG	10714085.63	1753005.39	2800.90
23	FG	10714090.13	1753022.73	2800.78
24	FG	10714091.39	1753027.54	2800.74
25	FG	10714070.82	1753004.06	2801.16
26	FG	10714072.08	1753008.90	2801.16
27	FG	10714076.58	1753026.25	2801.13
28	FG	10714077.83	1753031.09	2801.12

DRIVEWAY 32 GRADE POINT TABLE

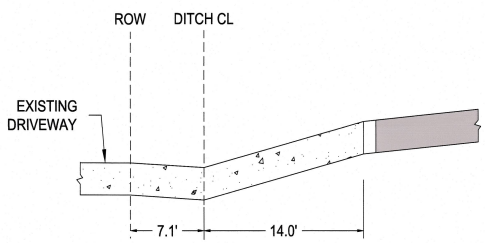
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
29	FG	10714050.06	1753059.43	2801.09
30	FG	10714051.31	1753064.27	2801.09
31	FG	10714055.77	1753081.44	2801.06
32	FG	10714057.02	1753086.28	2801.05
33	FL	10714046.81	1753062.86	2801.01
34	FL	10714047.44	1753065.28	2801.01
35	FL	10714051.90	1753082.45	2800.98
36	FL	10714052.52	1753084.87	2800.98
37	FG	10714042.31	1753061.45	2801.01
38	FG	10714043.57	1753066.28	2801.19
39	FG	10714048.02	1753083.45	2801.16
40	FG	10714049.29	1753088.30	2800.97
41	EG	10714032.91	1753063.90	2801.68
42	EG	10714034.31	1753068.68	2801.64
43	EG	10714038.80	1753085.85	2801.61
44	EG	10714039.91	1753090.74	2801.55



DRIVEWAY 30 & 32 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 31 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

PACKET 4.358

August 9, 2022

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

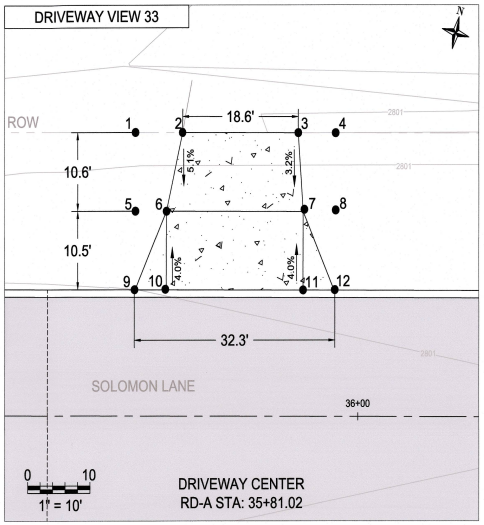
DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

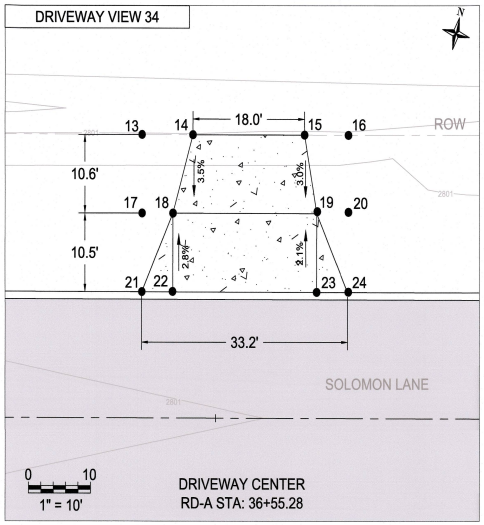
MIDLAND Engineering Services

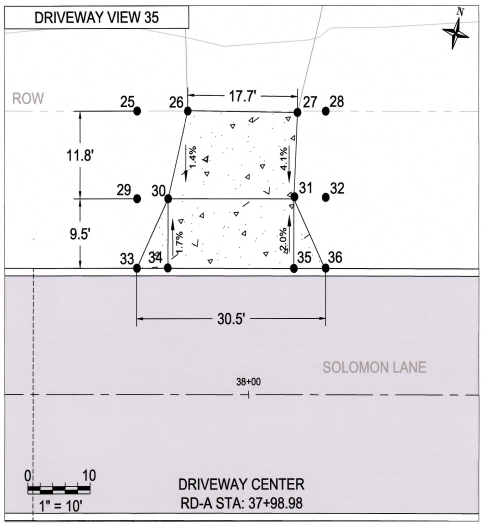
SOLOMON LANE PAVING
BOND PROJECT
DRIVEWAY PLAN
10 OF 16

STATE OF TEXAS
MARCH 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Pvng & Utilities PVNG\C12 DRWY.dwg May 31, 2022 - 8:48am pkingston







DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 33 GRADE POINT TABLE

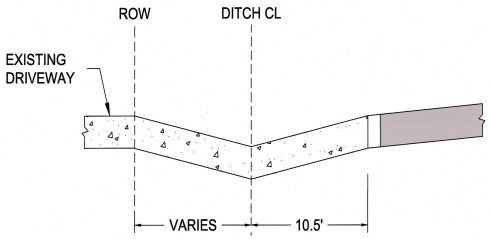
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10714113.76	1753085.17	2800.83
2	EG	10714115.66	1753092.52	2801.10
3	EG	10714120.34	1753110.57	2800.82
4	EG	10714121.80	1753116.19	2800.81
5	FL	10714103.50	1753087.83	2800.45
6	FL	10714104.75	1753092.67	2800.56
7	FL	10714110.29	1753114.01	2800.48
8	FL	10714111.54	1753118.85	2800.44
9	FG	10714093.24	1753090.49	2801.00
10	FG	10714094.49	1753095.33	2800.98
11	FG	10714100.03	1753116.67	2800.90
12	FG	10714101.28	1753121.51	2800.88

DRIVEWAY 34 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	EG	10714132.33	1753156.79	2800.77
14	EG	10714134.80	1753164.74	2800.79
15	EG	10714138.90	1753182.13	2800.73
16	EG	10714140.65	1753188.89	2800.65
17	FL	10714122.07	1753159.45	2800.42
18	FL	10714123.33	1753164.29	2800.42
19	FL	10714129.14	1753186.71	2800.41
20	FL	10714130.40	1753191.55	2800.41
21	FG	10714111.81	1753162.11	2800.73
22	FG	10714113.07	1753166.95	2800.71
23	FG	10714118.88	1753189.37	2800.63
24	FG	10714120.14	1753194.21	2800.61

DRIVEWAY 35 GRADE POINT TABLE

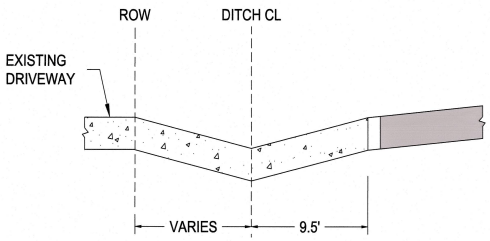
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
25	EG	10714168.45	1753296.07	2800.27
26	EG	10714170.55	1753303.97	2800.22
27	EG	10714174.76	1753321.13	2800.47
28	EG	10714176.05	1753325.40	2800.25
29	FL	10714156.98	1753299.04	2800.08
30	FL	10714158.26	1753303.87	2800.06
31	FL	10714163.36	1753323.52	2799.99
32	FL	10714164.74	1753328.33	2799.97
33	FG	10714147.93	1753301.39	2800.23
34	FG	10714149.19	1753306.23	2800.22
35	FG	10714154.28	1753325.88	2800.18
36	FG	10714155.54	1753330.72	2800.17



DRIVEWAY 33 & 34 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 35 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

PAVER 4.359

August 9, 2022

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

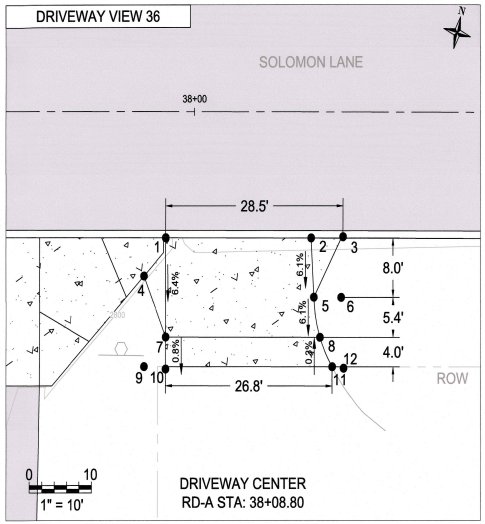
MIDLAND Engineering Services

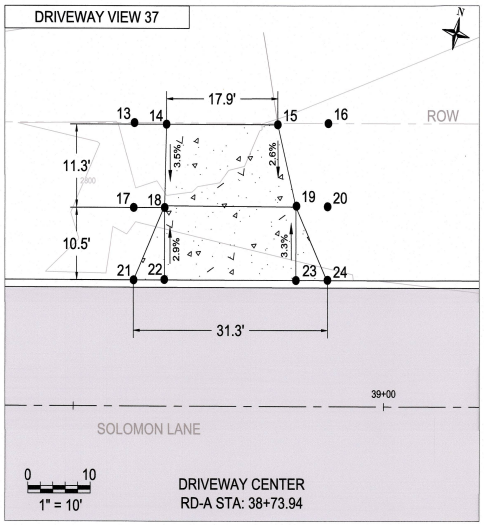
SOLOMON LANE PAVING BOND PROJECT
DRIVEWAY PLAN
11 OF 16

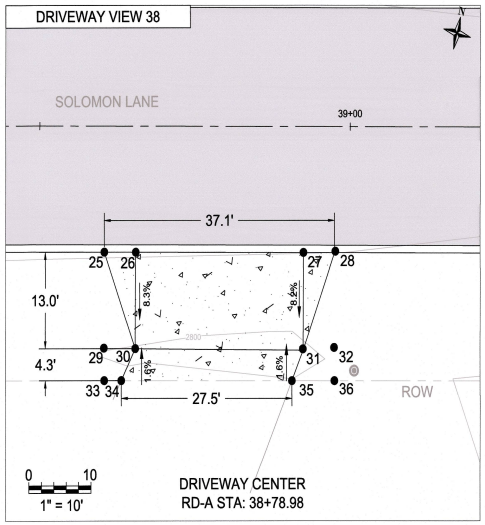
STATE OF TEXAS
MAY 31, 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

43
OF 64

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Proj & Utils\3 DWGS\3.1 DWG\Plans PVMG\C12 DRWY.dwg May 31, 2022 - 8:46am johnston







DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 36 GRADE POINT TABLE

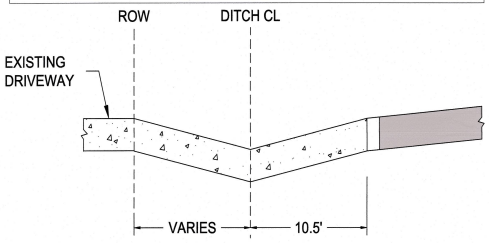
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10714118.39	1753322.91	2800.21
2	FG	10714124.27	1753345.57	2800.16
3	FG	10714125.48	1753350.26	2800.15
4	FG	10714112.50	1753320.81	2799.64
5	FG	10714116.63	1753348.01	2799.62
6	EG	10714117.75	1753352.27	2799.36
7	FL	10714105.42	1753326.27	2799.34
8	FL	10714111.66	1753350.32	2799.34
9	EG	10714100.68	1753323.87	2799.34
10	EG	10714101.56	1753327.27	2799.37
11	EG	10714108.33	1753353.23	2799.35
12	EG	10714108.69	1753354.63	2799.35

DRIVEWAY 37 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	EG	10714187.95	1753371.29	2800.06
14	EG	10714189.10	1753376.46	2800.17
15	EG	10714193.59	1753393.80	2799.97
16	EG	10714195.77	1753401.44	2799.80
17	FL	10714179.88	1753374.16	2799.78
18	FL	10714178.37	1753378.94	2799.77
19	FL	10714183.57	1753399.44	2799.68
20	FL	10714184.85	1753404.27	2799.66
21	FG	10714167.44	1753376.61	2800.08
22	FG	10714168.70	1753381.45	2800.07
23	FG	10714174.00	1753401.92	2800.03
24	FG	10714175.26	1753406.76	2800.02

DRIVEWAY 38 GRADE POINT TABLE

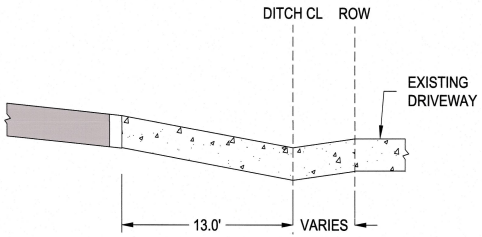
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
25	FG	10714134.72	1753385.87	2800.08
26	FG	10714135.97	1753390.71	2800.07
27	FG	10714142.77	1753416.93	2800.01
28	FG	10714144.03	1753421.77	2800.00
29	FG	10714122.15	1753389.15	2799.00
30	FG	10714123.41	1753393.97	2798.99
31	FG	10714130.05	1753420.23	2798.94
32	FG	10714131.32	1753425.09	2798.93
33	EG	10714117.98	1753390.24	2799.09
34	EG	10714118.67	1753392.90	2799.06
35	EG	10714125.61	1753419.51	2799.01
36	EG	10714127.33	1753426.12	2799.19



DRIVEWAY 37 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 38 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

BACKET

4.360

August 9, 2022

Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

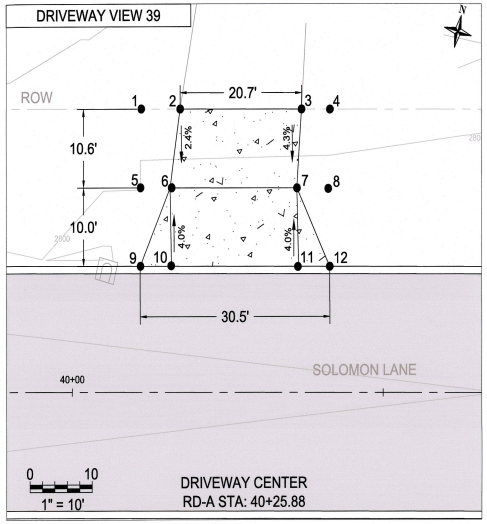
MIDLAND Engineering Services

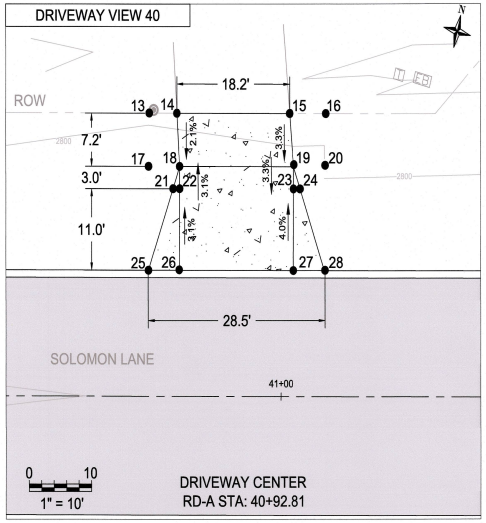
SOLOMON LANE PAVING BOND PROJECT
DRIVEWAY PLAN
12 OF 16

STATE OF TEXAS
MAY 24 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

44
OF 64

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Prvg & Util\03 DWG\03.1 DWG\Plans PVNG\C12 DRWY.dwg May 31, 2022 - 8:45am jshingleton





DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

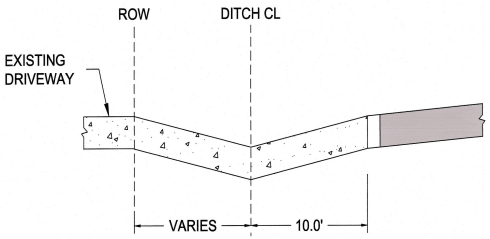
EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY 39 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10714225.92	1753517.72	2799.43
2	EG	10714227.52	1753523.87	2799.60
3	EG	10714232.42	1753542.77	2799.77
4	EG	10714233.56	1753547.18	2799.68
5	FL	10714215.65	1753520.38	2799.16
6	FL	10714216.84	1753524.99	2799.35
7	FL	10714221.97	1753544.71	2799.31
8	FL	10714223.30	1753549.84	2799.10
9	FG	10714205.41	1753523.04	2799.78
10	FG	10714206.67	1753527.88	2799.77
11	FG	10714211.80	1753547.66	2799.73
12	FG	10714213.06	1753552.50	2799.71

DRIVEWAY 40 GRADE POINT TABLE

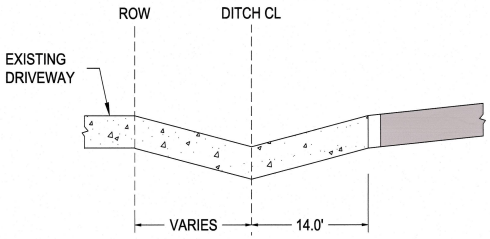
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
13	EG	10714242.92	1753583.26	2799.28
14	EG	10714244.06	1753587.66	2799.34
15	EG	10714248.62	1753605.22	2799.49
16	EG	10714250.02	1753610.66	2799.47
17	FL	10714235.96	1753585.06	2799.09
18	FL	10714237.22	1753589.90	2799.19
19	FG	10714241.81	1753607.62	2799.25
20	FL	10714243.07	1753612.46	2799.03
21	FG	10714233.06	1753585.81	2799.28
22	FG	10714234.31	1753590.65	2799.28
23	FL	10714238.91	1753608.37	2799.15
24	FL	10714239.18	1753609.41	2799.04
25	FG	10714222.41	1753588.58	2799.64
26	FG	10714223.67	1753593.42	2799.63
27	FG	10714228.26	1753611.13	2799.59
28	FG	10714229.52	1753615.97	2799.58



DRIVEWAY 39 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 40 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

PACKET 4.361

August 9, 2022

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description

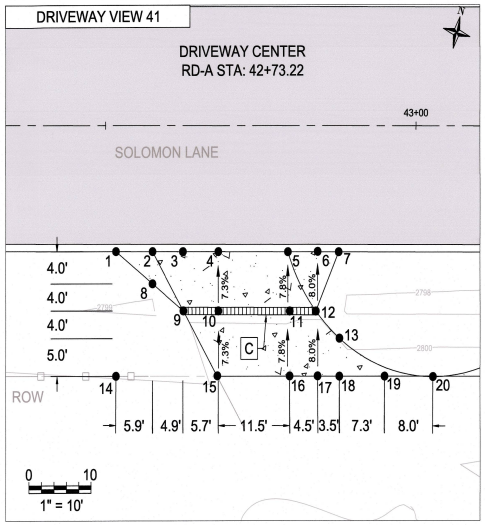
DRAWN/DESIGNED: PAK
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APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

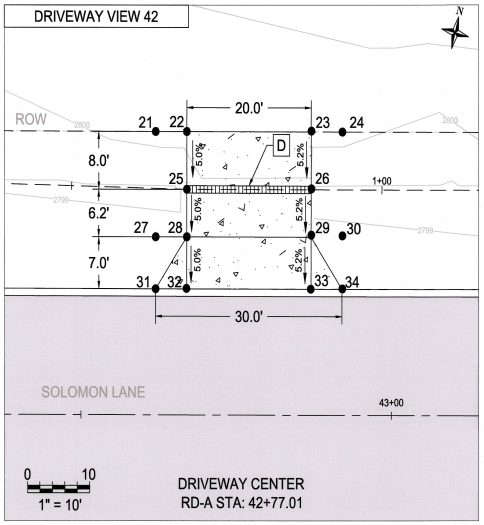
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SOLOMON LANE PAVING
BOND PROJECT
DRIVEWAY PLAN
13 OF 16

STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

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DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY KEYED NOTES:

C 22.0' - DRIVEWAY TRENCH DRAIN DETAIL D11 (A) & (B), SHEET 61.

D 20.0' - DRIVEWAY TRENCH DRAIN DETAIL D11 (A) & (B), SHEET 61.

DRIVEWAY 41 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FG	10714232.93	1753764.59	2799.29
2	FG	10714234.41	1753770.29	2799.27
3	FG	10714235.65	1753775.05	2799.26
4	FG	10714237.08	1753780.56	2799.25
5	FG	10714239.89	1753791.43	2799.23
6	FG	10714241.09	1753796.05	2799.22
7	FG	10714241.94	1753799.33	2799.21
8	FG	10714230.21	1753771.40	2798.55
9	FG	10714227.92	1753777.12	2799.84
	INV	-------	-------	2798.84
10	FG	10714229.33	1753782.58	2799.83
11	FG	10714232.22	1753793.71	2799.86
12	FG	10714233.28	1753797.78	2799.86
	INV	-------	-------	2798.86
13	FG	10714230.69	1753802.38	2799.69
14	EG	10714216.67	1753768.83	2800.38
15	EG	10714220.78	1753784.63	2800.49
16	EG	10714223.73	1753795.93	2800.56
17	EG	10714224.87	1753800.28	2800.58
18	EG	10714225.75	1753803.67	2800.60
19	EG	10714227.59	1753810.73	2800.64
20	EG	10714229.49	1753818.28	2800.69

DRIVEWAY 42 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
21	EG	10714288.93	1753760.71	2800.24
22	EG	10714290.19	1753765.55	2800.32
23	EG	10714295.22	1753784.96	2800.33
24	EG	10714296.48	1753789.80	2800.22
25	FG	10714282.66	1753767.50	2799.92
	INV	-------	-------	2798.92
26	FG	10714287.68	1753786.91	2799.91
	INV	-------	-------	2798.91
27	FG	10714275.21	1753764.27	2798.77
28	FG	10714276.46	1753769.11	2799.61
29	FG	10714281.49	1753788.52	2799.58
30	FG	10714282.78	1753793.47	2798.42
31	FG	10714268.43	1753766.03	2799.27
32	FG	10714269.69	1753770.87	2799.26
33	FG	10714274.72	1753790.27	2799.22
34	FG	10714275.97	1753795.11	2799.21

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

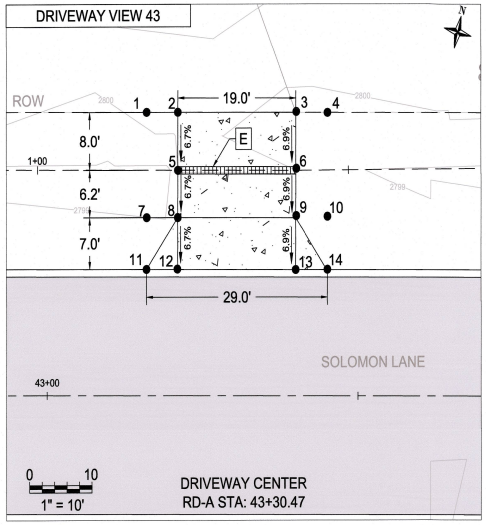
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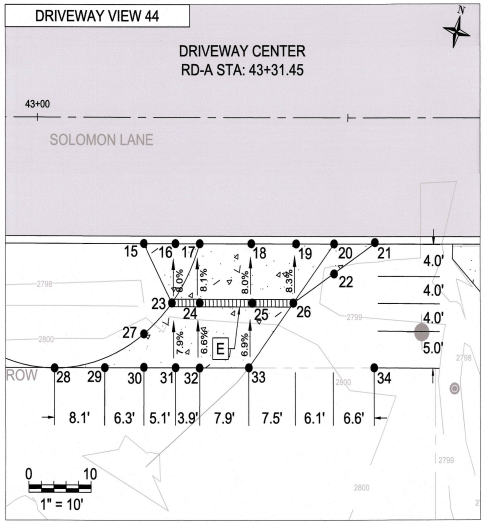
SOLOMON LANE PAVING
BOND PROJECT
DRIVEWAY PLAN
14 OF 16

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
MAY 23, 2022

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OF 64

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DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY KEYED NOTES:

E 20.0' - DRIVEWAY TRENCH DRAIN DETAIL D11 (A) & (B), SHEET 61.

DRIVEWAY 43 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10714302.49	1753812.97	2800.26
2	EG	10714303.74	1753817.81	2800.56
3	EG	10714308.51	1753836.19	2800.58
4	EG	10714309.76	1753841.03	2800.48
5	FG	10714296.17	1753819.77	2800.02
	INV (TRENCH DRAIN)	-------	-------	2799.02
	FL (DITCH)	-------	-------	2798.85
6	FL	10714300.94	1753838.16	2800.03
	INV	-------	-------	2799.03
7	FG	10714288.76	1753816.53	2798.24
8	FG	10714290.02	1753821.37	2799.61
9	FG	10714294.78	1753839.75	2799.59
10	FG	10714296.04	1753844.59	2798.20
11	FG	10714281.98	1753818.29	2799.16
12	FG	10714283.24	1753823.13	2799.15
13	FG	10714288.01	1753841.51	2799.11
14	FG	10714289.26	1753846.35	2799.10

* DITCH FLOWLINE AT DRIVEWAY 43 GRADE POINT 5 IS SLIGHTLY LOWER THAN TRENCH DRAIN STRUCTURE INVERT AT SAME LOCATION.

DRIVEWAY 44 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
15	FG	10714249.37	1753827.96	2799.17
16	FG	10714250.65	1753832.91	2799.16
17	FG	10714251.63	1753836.68	2799.15
18	FG	10714253.69	1753844.72	2799.14
19	FG	10714255.48	1753851.59	2799.12
20	FG	10714257.06	1753857.62	2799.10
21	FG	10714258.68	1753863.88	2799.09
22	FG	10714253.18	1753858.58	2799.44
	FG	10714242.76	1753834.35	2799.80
	INV	-------	-------	2798.80
24	FG	10714243.89	1753838.70	2799.80
25	FG	10714245.97	1753846.74	2799.78
26	FG	10714247.67	1753853.27	2799.78
	INV	-------	-------	2798.78
27	FG	10714237.58	1753831.03	2800.14
28	EG	10714229.49	1753818.28	2800.69
29	EG	10714231.59	1753826.10	2800.62
30	EG	10714233.18	1753832.18	2800.55
31	EG	10714234.47	1753837.13	2800.51
32	EG	10714235.45	1753840.90	2800.47
33	EG	10714237.44	1753848.53	2800.40
34	EG	10714242.54	1753868.09	2799.81

Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

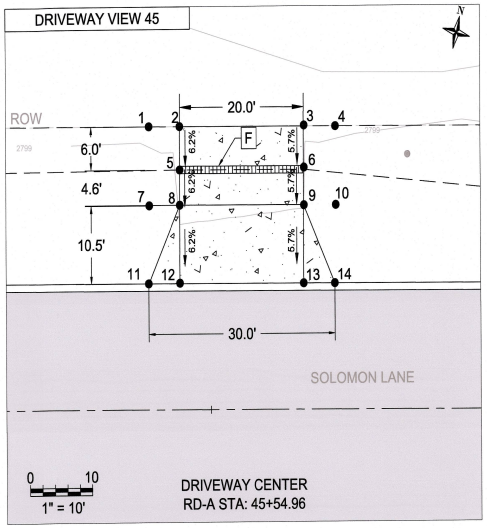
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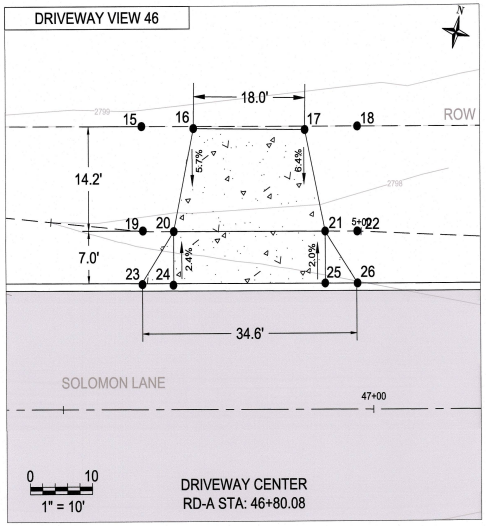
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DRIVEWAY PLAN
15 OF 16

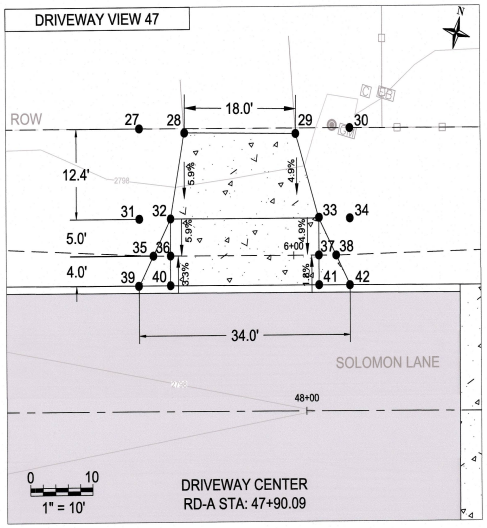
STATE OF TEXAS
May 31, 2022
JOSHUA C. FERGUSON
117692
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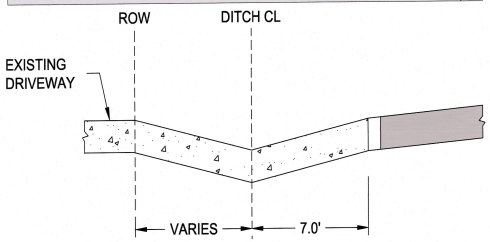
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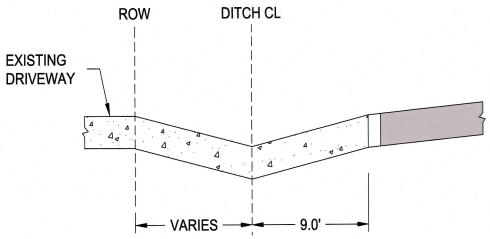




DRIVEWAY 46 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.



DRIVEWAY 47 CROSS SECTION

NOTES:

1. MATCH DITCH CROSS-SECTION SLOPES BETWEEN RIBBON CURB AND EXISTING DRIVEWAY.
2. MATCH DRIVEWAY DETAILS D06 AND D07, SHEET 60, UNLESS OTHERWISE NOTED.

DRIVEWAY PAVEMENT NOTES:

I) SEE SHEET 2 NOTES.

II) MATCH EXISTING PAVEMENT SURFACE ELEVATIONS AT ALL TIE-IN LOCATIONS WITH NEW INFRASTRUCTURE.

III) ALL CONCRETE PAVEMENT IS TO BE FIBER REINFORCED PER CITY DETAILS.

IV) ALL GRADE POINTS SHOWN IN PLAN VIEW ARE SURFACE.

GRADE TABLE LEGEND:

EG	EXISTING GRADE
EG CL	EXISTING CENTERLINE GRADE
FG	FINISH GRADE
FL	FLOWLINE
CL	CENTERLINE FINISH GRADE
CL FL	CENTERLINE FLOWLINE

DRIVEWAY KEYED NOTES:

F 20.0' - DRIVEWAY TRENCH DRAIN DETAIL D11 (A) & (B), SHEET 61.

DRIVEWAY 45 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	EG	10714358.72	1754029.82	2799.62
2	EG	10714359.97	1754034.66	2799.82
3	EG	10714364.98	1754053.95	2799.64
4	EG	10714366.23	1754058.79	2799.28
5	FG	10714354.31	1754036.13	2799.45
	INV	--------	-------	2798.45
6	FG	10714359.31	1754055.42	2799.29
	INV	--------	-------	2798.29
7	FG	10714348.47	1754032.48	2798.11
8	FG	10714349.73	1754037.32	2799.16
9	FG	10714354.73	1754056.61	2799.04
10	FG	10714355.98	1754061.45	2797.82
11	FG	10714338.22	1754035.14	2798.53
12	FG	10714339.48	1754039.98	2798.51
13	FG	10714344.48	1754059.27	2798.44
14	FG	10714345.73	1754064.11	2798.43

DRIVEWAY 46 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
15	EG	10714389.55	1754148.71	2798.83
16	EG	10714391.35	1754156.76	2798.74
17	EG	10714395.68	1754174.17	2798.79
18	EG	10714398.21	1754182.13	2798.69
19	FL	10714375.81	1754152.18	2797.95
20	FL	10714377.10	1754157.17	2797.93
21	FL	10714383.22	1754180.76	2797.88
22	FL	10714384.53	1754185.82	2797.86
23	FG	10714369.05	1754154.03	2798.12
24	FG	10714370.31	1754158.86	2798.10
25	FG	10714376.47	1754182.60	2798.02
26	FG	10714377.72	1754187.44	2798.00

DRIVEWAY 47 GRADE POINT TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
27	EG	10714417.24	1754255.50	2798.49
28	EG	10714419.05	1754262.47	2798.63
29	EG	10714423.55	1754279.83	2798.44
30	EG	10714425.75	1754288.32	2797.94
31	FG	10714405.24	1754258.61	2797.62
32	FG	10714406.50	1754263.45	2797.90
33	FG	10714412.75	1754286.53	2797.83
34	FG	10714414.01	1754291.37	2797.57
35	FL	10714401.19	1754262.01	2797.59
36	FL	10714401.88	1754264.67	2797.58
37	FL	10714407.88	1754287.79	2797.56
38	FL	10714408.57	1754290.48	2797.55
39	FG	10714396.75	1754260.81	2797.75
40	FG	10714398.00	1754265.65	2797.74
41	FG	10714404.00	1754288.79	2797.66
42	FG	10714405.26	1754293.63	2797.64

PACKET 4.364

August 9, 2022

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:10
PROJECT NO.: BPU19-05
DATE: MAY 2022

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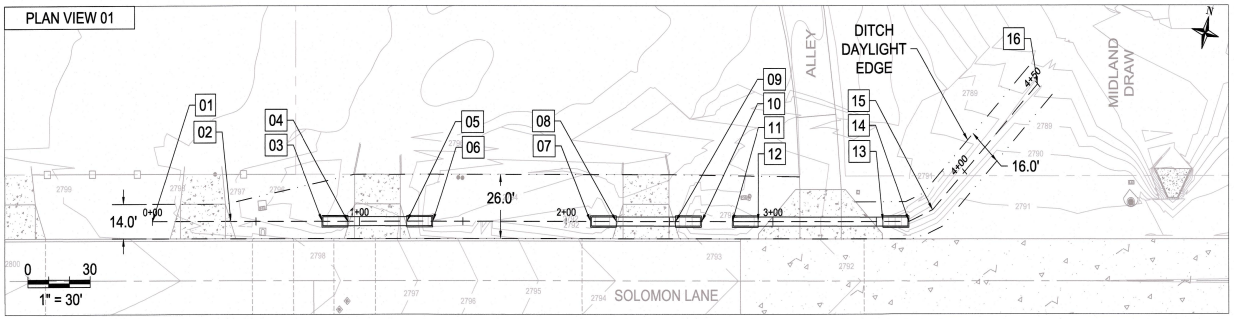
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16 OF 16

STATE OF TEXAS
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Jul 31, 2022

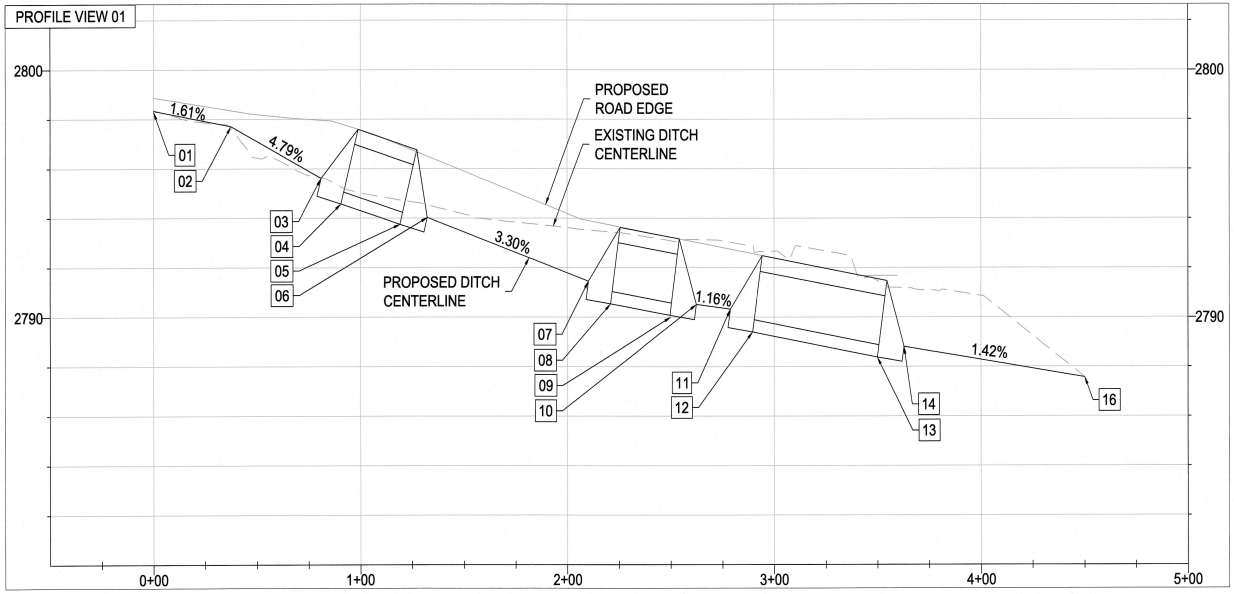
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PLAN VIEW 01



PROFILE VIEW 01



DITCH CONSTRUCTION NOTES:

A) RETAIN 6" TOP SOIL FOR STABILIZATION AND SEEDING, SEE SHEETS 53 THROUGH 55.

B) SEE ROAD PLAN AND PROFILE SHEETS 17 THROUGH 48.

C) NORTH DITCH CENTERLINE IS 7.0' FROM NORTH SOLOMON LANE ROAD EDGE UNLESS OTHERWISE NOTED.

DITCH KEYED NOTES:

01 SD-A STA: 0+00.00
START NORTH DITCH.
CENTERLINE FG = 2798.30
NORTH EG (7.0' OFFSET) = 2798.23
SOUTH EG = 2798.54
SOUTH FG = 2798.85

02 SD-A STA: 0+37.75
GRADE BREAK
CENTERLINE FG = 2797.64
NORTH EG (7.5' OFFSET) = 2797.44
SOUTH EG = 2797.72
SOUTH FG = 2798.32

03 SD-A STA: 0+89.48
END NORTH DITCH.
START 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
CENTERLINE FG = 2796.60
NORTH EG (15.9' OFFSET) = 2795.33
SOUTH EG = 2796.24
SOUTH FG = 2797.92

04 SD-A STA: 0+94.48
END 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
22.5' - 4.0' X 2.0' RCC BOX CULVERT
SLOPE = 2.90%
CENTERLINE FG = 2797.33
CENTERLINE EG = 2795.14
BOX CULVERT INV = 2795.62

05 SD-A STA: 1+22.97
START 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
CENTERLINE FG =2796.89
CENTERLINE EG = 2794.68
BOX CULVERT INV = 2794.03

06 SD-A STA: 1+27.97
END 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
START NORTH DITCH.
CENTERLINE FG = 2793.93
NORTH EG (19.0' OFFSET) = 2795.15
SOUTH EG = 2795.19
SOUTH FG = 2796.41

07 SD-A STA: 2+19.23
END NORTH DITCH.
START 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
CENTERLINE FG = 2791.67
NORTH EG (19.0' OFFSET) = 2793.95
SOUTH EG = 2793.99
SOUTH FG = 2793.86

08 SD-A STA: 2+24.23
END 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
22.5' - 4.0' X 2.0' RCC BOX CULVERT
SLOPE = 1.62%
CENTERLINE FG = 2793.45
CENTERLINE EG = 2793.42
BOX CULVERT INV = 2791.46

09 SD-A STA: 2+52.89
START 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
CENTERLINE FG =2793.19
CENTERLINE EG = 2793.05
BOX CULVERT INV = 2790.51

10 SD-A STA: 2+57.89
END 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
START NORTH DITCH.
CENTERLINE FG = 2790.48
NORTH EG (19.0' OFFSET) = 2793.52
SOUTH EG = 2793.47
SOUTH FG = 2792.96

11 SD-A STA: 2+87.82
END NORTH DITCH.
START 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
CENTERLINE FG = 2790.53
NORTH EG (19.5' OFFSET) = 2793.20
SOUTH EG = 2793.25
SOUTH FG = 2792.71

12 SD-A STA: 2+92.82
END 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
60.0' - 4.0' X 2.0' RCC BOX CULVERT
SLOPE = 1.69%
CENTERLINE FG = 2792.29
CENTERLINE EG = 2792.64
BOX CULVERT INV = 2790.32

13 SD-A STA: 3+60.67
START 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
CENTERLINE FG = 2791.28
CENTERLINE EG = 2791.30
BOX CULVERT INV = 2788.81

14 SD-A STA: 3+65.67
END 5.0' X 4.0' X 2.0' SAFETY END TREATMENT.
START NORTH DITCH.
22.5° BEND NORTH.
N: 10713561.45
E: 1751013.26
CENTERLINE FG = 2788.78
NORTH EG (8.0' OFFSET) = 2791.31
SOUTH EG (8.0' OFFSET) = 2791.43
SOUTH FG (8.0' OFFSET) = 2791.64

15 SD-A STA: 3+78.13
22.5° BEND NORTH.
N: 10713572.21
E: 1751024.04
CENTERLINE FG = 2788.60
NORTH EG (8.0' OFFSET) = 2791.18
SOUTH EG (8.0' OFFSET) = 2791.21

16 SD-A STA: 4+50.00
END NORTH DITCH.
N: 10713606.70
E: 1751044.29
CENTERLINE EG = 2787.57
NORTH EG (8.0' OFFSET) = 2787.22
SOUTH EG (8.0' OFFSET) = 2788.00

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:3
HORIZ. SCALE: 1:30
PROJECT NO.: BPU18-05
DATE: MAY 2022

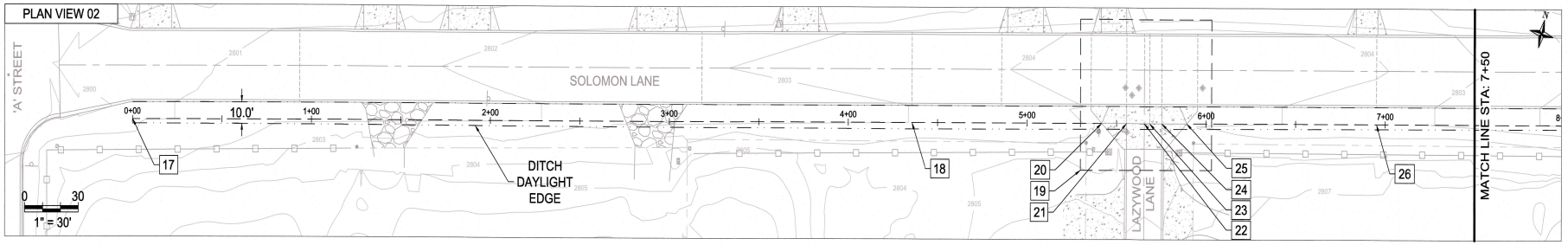
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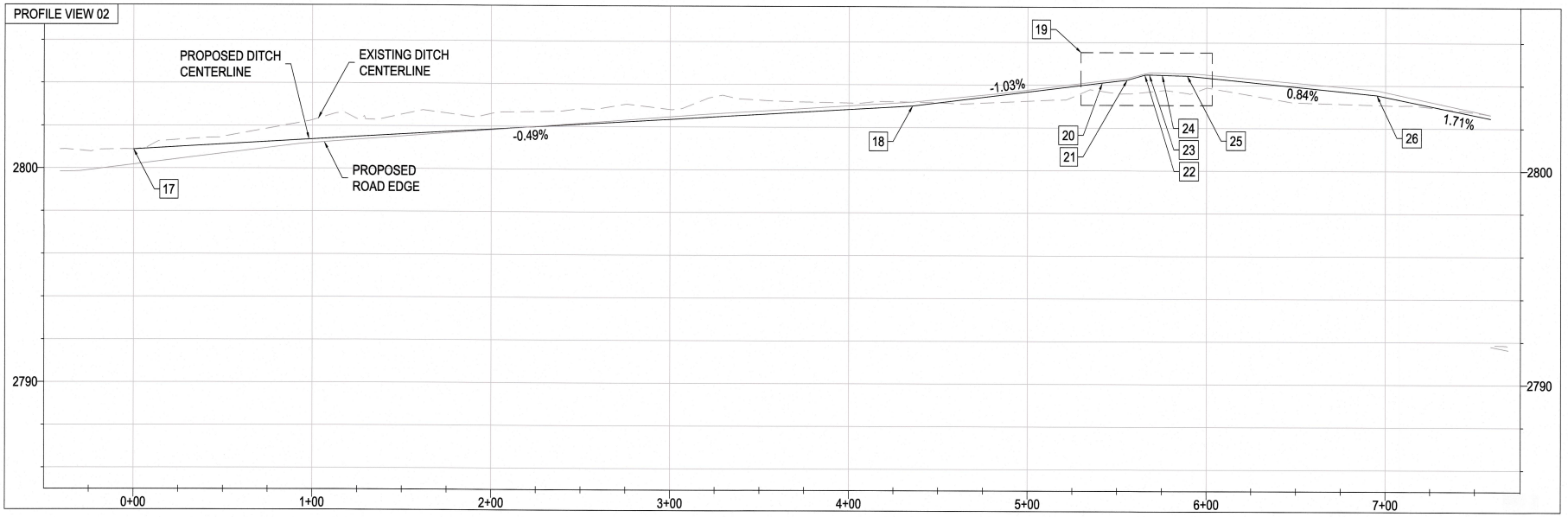
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BOND PROJECT

DITCH PLAN & PROFILE
NORTH DITCH 01

STATE OF TEXAS
MAY 24 2022
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DITCH CONSTRUCTION NOTES:

A) RETAIN 6" TOP SOIL FOR STABILIZATION AND SEEDING, SEE SHEET 53 THROUGH 55.

B) SEE ROAD PLAN AND PROFILE OF SHEET 17 THROUGH 48.

D) SOUTH DITCH CENTERLINE IS 8.0' FROM SOUTH SOLOMON LANE ROAD EDGE UNLESS OTHERWISE NOTED.

DITCH KEYED NOTES:

17 SD-B STA: 0+00.00
START SOUTH DITCH.
N: 10713171.99
E: 1749711.93
CENTERLINE EG = 2800.88
NORTH EG = 2800.65
NORTH FG = 2800.13
SOUTH EG (2.0' OFFSET) = 2801.27

18 SD-B STA: 4+35.60
GRADE BREAK
CENTERLINE FG = 2803.01
NORTH EG = 2803.06
NORTH FG = 2803.19
SOUTH EG (2.0' OFFSET) = 2804.08

19 INTERSECTION VIEW 01, SHEET 24.

20 SD-B STA: 5+41.70
GRADE BREAK
START VALLEY GUTTER CROSS SECTION.
CENTERLINE FG = 2804.11

21 SD-B STA: 5+55.63
GRADE BREAK
CENTERLINE FG = 2804.23

22 SD-B STA: 5+65.38
GRADE BREAK
CENTERLINE FG = 2804.45

23 SD-B STA: 5+68.38
GRADE BREAK
CENTERLINE FG = 2804.50

24 SD-B STA: 5+75.13
GRADE BREAK
CENTERLINE FG = 2804.49

25 SD-B STA: 5+89.18
GRADE BREAK
END VALLEY GUTTER CROSS SECTION.
CENTERLINE FG = 2804.45

26 SD-B STA: 6+95.15
GRADE BREAK
CENTERLINE FG = 2803.56
NORTH EG = 2802.68
NORTH FG = 2803.78
SOUTH EG (2.0' OFFSET) = 2804.25

811 Know what's below. Call before you dig.

Description	Rev. No.	Date	By

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:3
HORIZ. SCALE: 1:30
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

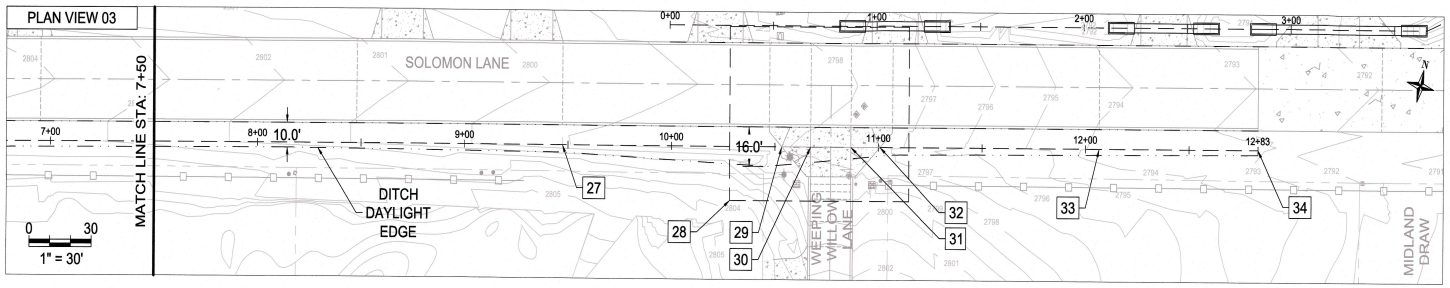
SOLOMON LANE PAVING
BOND PROJECT

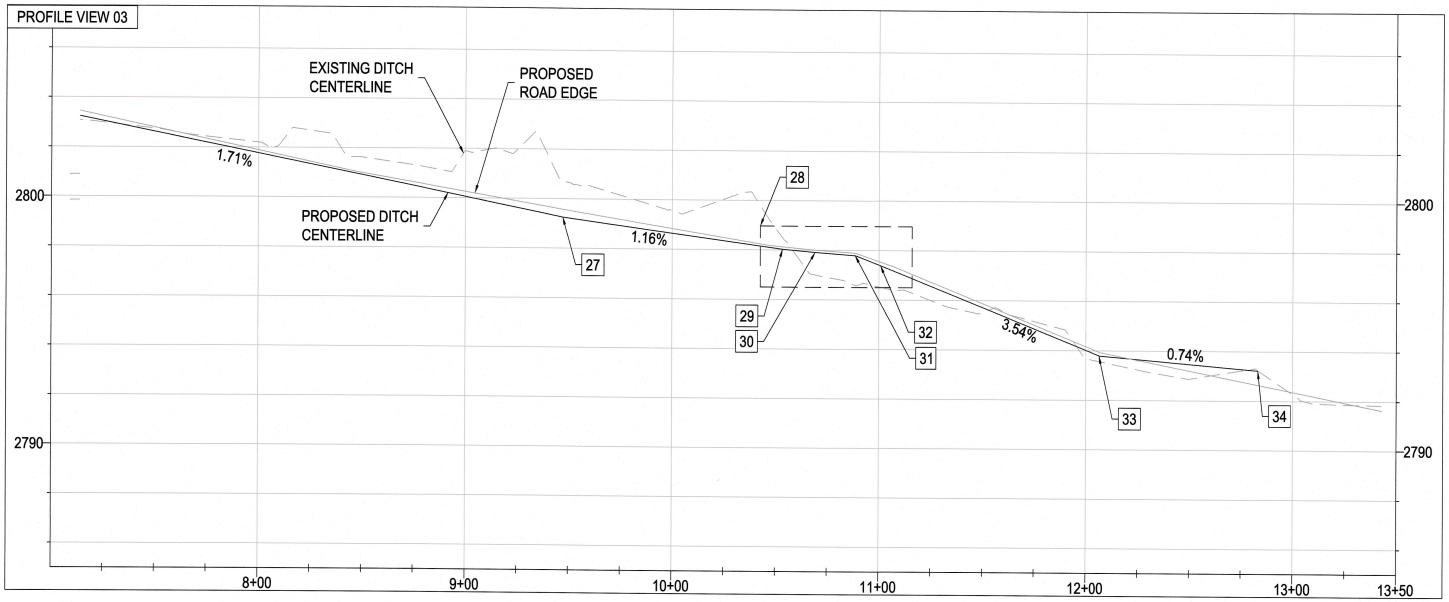
DITCH PLAN & PROFILE
SOUTH DITCH: 1 OF 2

STATE OF TEXAS
MAY 31 2022
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER

50
OF 64

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Proj & Utility\03 DWG\S1 DWG\Plans PVN\DG13 STM PP.dwg May 31, 2022 - 8:26am jdelgadillo





DITCH CONSTRUCTION NOTES:

A) RETAIN 6" TOP SOIL FOR STABILIZATION AND SEEDING, SEE SHEET 53 THROUGH 55.

B) SEE ROAD PLAN AND PROFILE OF SHEET 17 THROUGH 48.

D) SOUTH DITCH CENTERLINE IS 8.0' FROM SOUTH SOLOMON LANE ROAD EDGE UNLESS OTHERWISE NOTED.

DITCH KEYED NOTES:

27 SD-B STA: 9+47.32
GRADE BREAK
CENTERLINE FG = 2799.25
NORTH EG = 2800.20
NORTH FG = 2799.57
SOUTH EG (2.0' OFFSET) = 2802.36

28 INTERSECTION VIEW 02, SHEET 25.

29 SD-B STA: 10+53.28
START VALLEY GUTTER CROSS SECTION.
CENTERLINE FG = 2796.08

30 SD-B STA: 10+67.19
START VALLEY GUTTER CROSS SECTION.
CENTERLINE FG = 2797.90

31 SD-B STA: 10+86.69
GRADE BREAK
CENTERLINE FG = 2797.78

32 SD-B STA: 11+00.70
GRADE BREAK
END VALLEY GUTTER CROSS SECTION.
CENTERLINE FG = 2797.39

33 SD-B STA: 12+06.64
GRADE BREAK
CENTERLINE FG = 2793.79
NORTH EG = 2794.07
NORTH FG = 2793.94
SOUTH EG (2.0' OFFSET) = 2794.18

34 SD-B STA: 12+83.00
END SOUTH DITCH.
N: 10713495.37
E: 1750953.79
CENTERLINE EG = 2793.19
NORTH EG = 2793.05
NORTH FG = 2792.64
SOUTH EG (2.0' OFFSET) = 2792.92

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:3
HORIZ. SCALE: 1:30
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

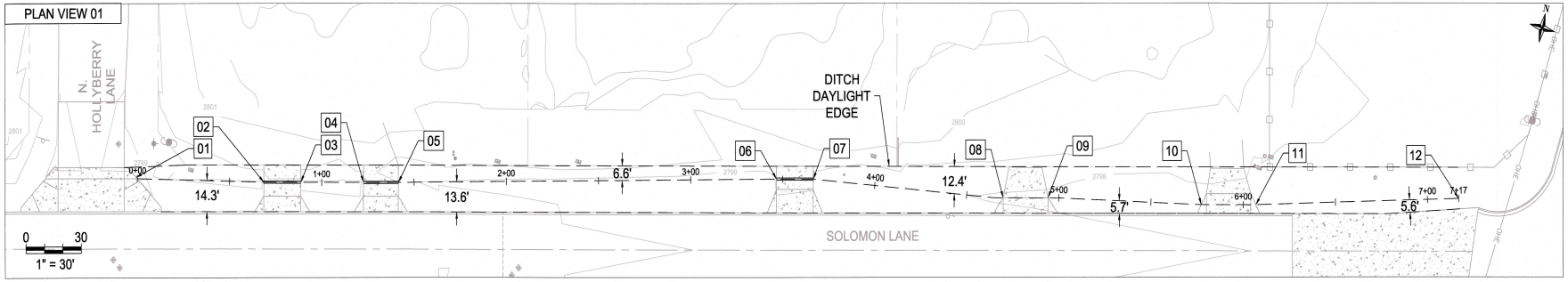
SOLOMON LANE PAVING
BOND PROJECT

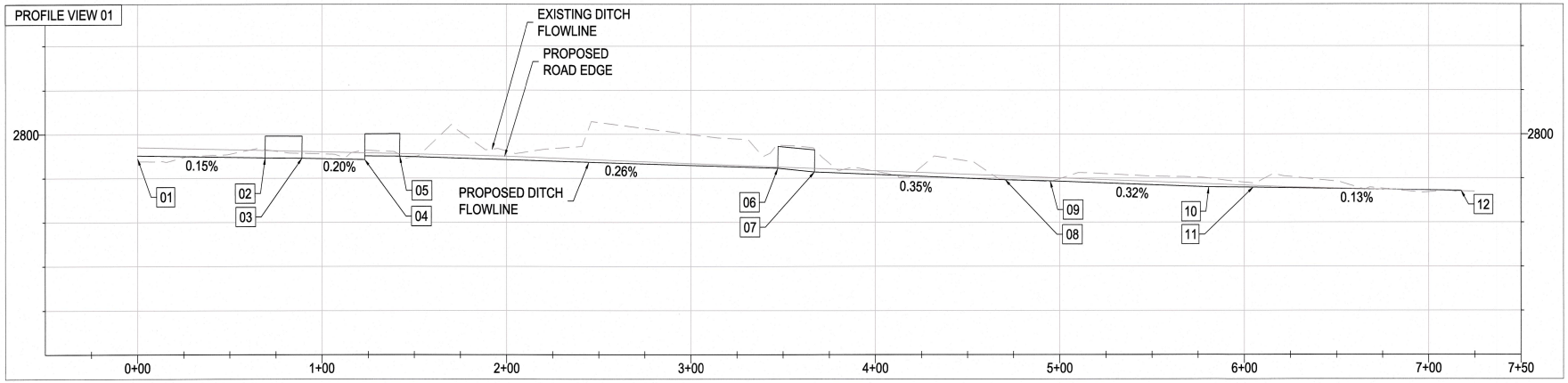
DITCH PLAN & PROFILE
SOUTH DITCH: 2 OF 2

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31, 2022

51
OF 64

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Pvng & Util\03 DWG\53-1 DWG\Plans PVNG\C13 STM PP.dwg May 31, 2022 - 8:20am pjungsten





DITCH CONSTRUCTION NOTES:

A) RETAIN 6" TOP SOIL FOR STABILIZATION AND SEEDING, SEE SHEETS 53 THROUGH 55.

B) SEE ROAD PLAN AND PROFILE SHEETS 17 THROUGH 48.

DITCH KEYED NOTES:

01 SD-C STA: 0+00.00
START NORTH DITCH.
N: 10714267.00 (DITCH FLOWLINE)
E: 1753700.76 (DITCH FLOWLINE)
SURFACE FG = 2799.03

02 SD-C STA: 0+68.55
START DRIVEWAY TRENCH DRAIN.
N: 10714282.66 (DITCH FLOWLINE)
E: 1753767.50 (DITCH FLOWLINE)
SLOPE = 0.05%
SURFACE FG = 2799.92
SURFACE EG = 2799.31
TRENCH DRAIN INV = 2798.92

03 SD-C STA: 0+88.55
END DRIVEWAY TRENCH DRAIN.
N: 10714287.68 (DITCH FLOWLINE)
E: 1753786.91 (DITCH FLOWLINE)
SURFACE FG =2799.91
SURFACE EG = 2799.31
TRENCH DRAIN INV = 2798.92

04 SD-C STA: 1+22.54
START DRIVEWAY TRENCH DRAIN.
N: 10714296.17 (DITCH FLOWLINE)
E: 1753819.77(DITCH FLOWLINE)
SLOPE = 0.05%
SURFACE FG = 2800.02
SURFACE EG = 2799.27
TRENCH DRAIN INV = 2799.02
DITCH FLOWLINE = 2798.85

05 SD-A STA: 1+42.54
END DRIVEWAY TRENCH DRAIN.
N: 10714300.94 (DITCH FLOWLINE)
E: 1753838.16 (DITCH FLOWLINE)
SURFACE FG =2800.03
SURFACE EG = 2799.10
TRENCH DRAIN INV = 2799.03

06 SD-A STA: 3+46.84
START DRIVEWAY TRENCH DRAIN.
N: 10714354.31 (DITCH FLOWLINE)
E: 1754036.13 (DITCH FLOWLINE)
SLOPE = 0.80%
SURFACE FG = 2799.45
SURFACE EG = 2799.57
TRENCH DRAIN INV = 2798.45

07 SD-A STA: 3+66.84
END DRIVEWAY TRENCH DRAIN.
N: 10714359.31 (DITCH FLOWLINE)
E: 1754055.42 (DITCH FLOWLINE)
SURFACE FG = 2799.29
SURFACE EG = 2799.38
TRENCH DRAIN INV = 2798.29

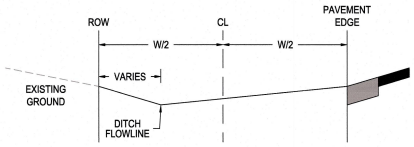
08 SD-A STA: 4+69.81
START DRIVEWAY APPROACH.
N: 10714377.10 (DITCH FLOWLINE)
E: 1754157.17 (DITCH FLOWLINE)
SURFACE FG = 2797.93
SURFACE EG = 2797.95

09 SD-A STA: 4+94.19
END DRIVEWAY APPROACH.
N: 10714383.22 (DITCH FLOWLINE)
E: 1754180.76 (DITCH FLOWLINE)
SURFACE FG = 2797.88
SURFACE EG = 2797.85

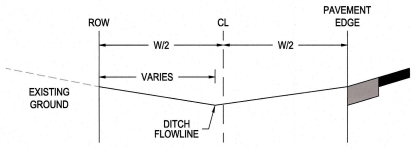
10 SD-A STA: 5+77.37
START DRIVEWAY APPROACH.
N: 10714401.19 (DITCH FLOWLINE)
E: 1754262.01 (DITCH FLOWLINE)
SURFACE FG = 2797.59
SURFACE EG = 2798.00

11 SD-A STA: 6+04.04
END DRIVEWAY APPROACH.
N: 10714408.57 (DITCH FLOWLINE)
E: 1754290.48 (DITCH FLOWLINE)
SURFACE FG = 2797.55
SURFACE EG = 2797.77

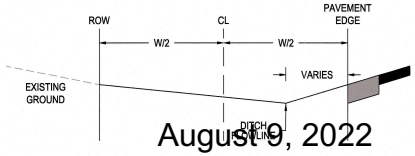
12 SD-A STA: 7+16.86
END NORTH DITCH.
N: 10714439.09 (DITCH FLOWLINE)
E: 1754396.21 (DITCH FLOWLINE)
SURFACE FG = 2797.43
NORTH EG (0.10' OFFSET) = 2797.35
SOUTH EG = 2797.54



DITCH FLOWLINE OFFSET NORTH
STA: 0+00.00 TO 3+66.84



DITCH FLOWLINE TRANSITION
STA: 3+66.84 TO 4+69.81



DITCH FLOWLINE OFFSET SOUTH
STA: 4+69.81 TO 7+16.86

PACKET 4,268 August 9, 2022

Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE: 1:3
HORIZ. SCALE: 1:30
PROJECT NO.: BPU19-05
DATE: MAY 2022

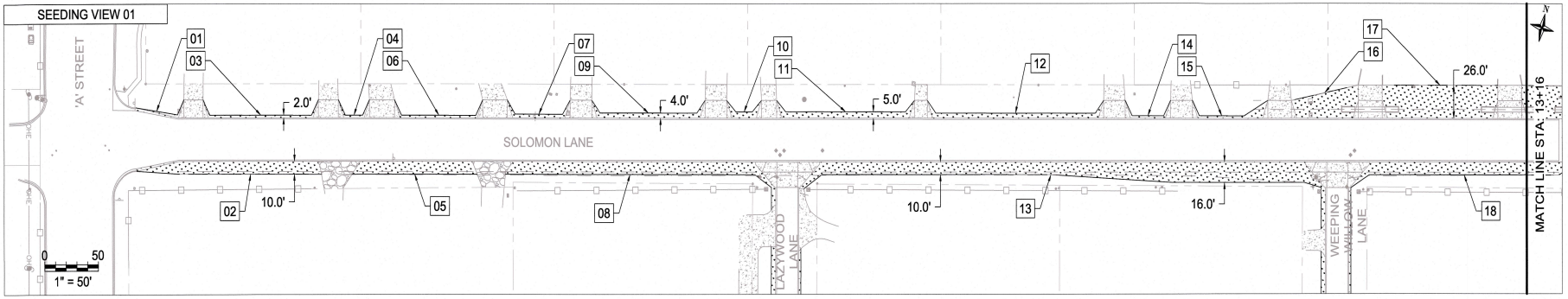
MIDLAND Engineering Services

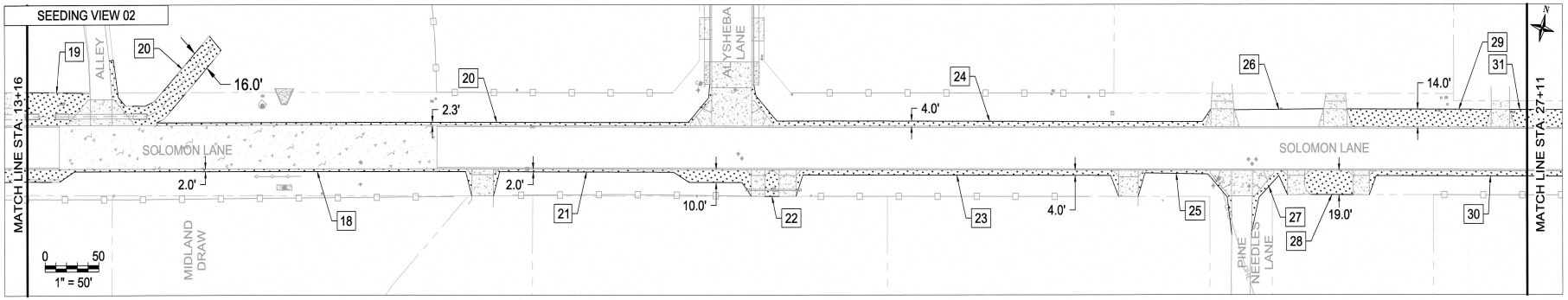
SOLOMON LANE PAVING BOND PROJECT

DITCH PLAN & PROFILE NORTH DITCH 02

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31, 2022

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Pvng & Utils\3 DWG\Sht's 1 DWG\Plans PVNG\Sh'S 53 TM PP.dwg May 31, 2022 - 8:19am plungston





VEGETATION AND SEEDING NOTES:

1. VEGETATION SEEDING AND WATERING:
   - i. THIS REFERS TO ALL PORTIONS OF SOLOMON LANE, LAZYWOOD LANE, WEEPING WILLOW LANE, AND MIDLAND DRAW DISTURBED BY CONSTRUCTION ACTIVITY FOR THIS PROJECT.
   - ii. REVEGETATE ALL AREAS AND SURFACES DISTURBED BY ANY CONSTRUCTION ACTIVITY THAT ARE SCHEDULED TO REMAIN NATURAL REGARDLESS OF WHETHER OR NOT THEY ARE WITHIN APPROVED PROJECT SITE OR WORK ZONE. NATURAL SURFACES ARE THOSE THAT WILL NOT RECEIVE A LAYER OF PAVEMENT, FLATWORK, STRUCTURE, OR OTHER IMPERVIOUS MATERIAL.
   - iii. REMOVE TOP SIX INCH (6") LAYER OF VEGETATION AND TOPSOIL EVENLY FOR ENTIRE DISTURBED AREA AND SET ASIDE DURING CONSTRUCTION.
   - iv. AFTER CONSTRUCTION PLACE SAVED VEGETATION AND TOPSOIL EVENLY ACROSS ENTIRE DISTURBED AREA AND RAKE SMOOTH. ADD ADDITIONAL TOPSOIL MATERIAL OF EQUAL OR BETTER QUALITY THAN ORIGINAL MATERIAL IF NECESSARY TO ACHIEVE A MINIMUM SIX INCH (6.0") TOPSOIL THICKNESS THROUGHOUT.
   - v. RAKE AREAS TO BE SEEDED TO ALLOW GOOD CONTACT BETWEEN SEEDS AND SOIL.
   - vi. UNIFORMLY DISTRIBUTE SEEDS BY SPREADER, BY HAND, OR BY OTHER EQUIVALENT METHOD.
   - vii. RAKE SEEDER AREA AGAIN AFTER SEEDING OCCURS SO THAT SEEDS ARE NOT LEFT EXPOSED ON SURFACE. RAKED SURFACE SHOULD BE RELATIVELY SMOOTH AND FLUSH WITH ADJACENT SURFACES.
   - viii. FERTILIZER IS TO BE PLACED UNIFORMLY OVER ALL SEEDED AREAS NO LESS THAN ONE (1) DAY AFTER SEEDS ARE PLACED.
   - ix. BEFORE PLANTING OPERATIONS BEGIN, FURNISH SEED TAGS FROM SEED SUPPLIER. SEED TAGS MUST SHOW PERCENT PURITY, PERCENT GERMINATION, AND DATE SEED WAS HARVESTED. SUBMIT SEED TAGS TO PROJECT ENGINEER FOR VERIFICATION OF APPROPRIATE POUNDS P.L.S./ACRE RATES.
   - x. TWO (2) TO THREE (3) DAYS AFTER FERTILIZER IS PLACED, SPRAY EVENLY WITH WATER EQUIVALENT TO A MINIMUM UNIFORM WATER VOLUME DEPTH OF 0.2-INCHES (0.2") FOR ENTIRE DISTURBED AREA AT A RATE OF NO LESS THAN ONCE (1) A DAY FOR TEN (10) CONSECUTIVE DAYS.
   - xi. PROVIDE SEED MIXTURES LISTED AT APPROPRIATE RATES DURING SPECIFIED SEASON:
     - a) SEED MIX TOTALING 130 LBS / ACRE, WHEN SEEDING BETWEEN OCTOBER AND FEBRUARY:
       SEED TYPE 01: SAHARA BERMUDA GRASS (UN-HULLED) CYNODON DACTYLON
       MIN. % PURE LIVE SEED REQUIRED: 85%
       POUNDS PURE LIVE SEED REQUIRED: 65 LBS / ACRE
       SEED TYPE 02: PERENNIAL RYE GRASS PINNACLE 2
       MIN. % PURE LIVE SEED REQUIRED: 85%
       POUNDS PURE LIVE SEED REQUIRED: 65 LBS / ACRE
     - b) SEED MIX TOTALING 20 LBS P.L.S. / ACRE, WHEN SEEDING BETWEEN MARCH AND SEPTEMBER:
       SEED TYPE 01: SAHARA BERMUDA GRASS (HULLED) CYNODON DACTYLON
       MIN. % PURE LIVE SEED REQUIRED: 85%
       POUNDS PURE LIVE SEED REQUIRED: 65 LBS / ACRE
     - c) NOTE THAT % PURE LIVE SEED = % PURITY X % GERMINATION.
     - d) WEED SEED IS NOT TO EXCEED 10% BY WEIGHT OF TOTAL PURE LIVE SEED AND OTHER MATERIAL IN THE MIXTURE. JOHNSON GRASS, NUT GRASS, OR OTHER NOXIOUS WEED SEED IS NOT ALLOWED.
     - e) IF SPECIFIED GRASS VARIETY IS NOT AVAILABLE, SUBMIT AVAILABLE SUBSTITUTION TO PROJECT ENGINEER FOR APPROVAL. PERMISSION FOR SUBSTITUTION WILL ONLY BE GRANTED AFTER PROJECT ENGINEER IS SATISFIED THAT SPECIFIED GRASS VARIETIES ARE NOT AVAILABLE.
     - f) DELIVER ALL FERTILIZER IN BAGS OR CONTAINERS CLEARLY LABELED SHOWING BAG ANALYSIS. PREFERRED ANALYSIS IS 18-3-4. APPLY FERTILIZER AT RATE THAT ACHIEVES NO LESS THAN 100 LBS N_2 / ACRE. APPLY FERTILIZER IN CONJUNCTION WITH SEEDING.
2. CONTRACTOR HAS SOLE RESPONSIBILITY FOR VEGETATING OR STABILIZING TO EXISTING OR BETTER CONDITION ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITY LOCATED OUTSIDE DESIGNATED PROJECT SITE OR APPROVED WORK ZONE AT CONTRACTOR'S SOLE EXPENSE.

VEGETATION AND SEEDING KEYED NOTES:

01	12-SY SEEDED AREA.
02	172-SY SEEDED AREA.
03	25-SY SEEDED AREA.
04	8-SY SEEDED AREA.
05	123-SY SEEDED AREA.
06	19-SY SEEDED AREA.
07	21-SY SEEDED AREA.
08	272-SY SEEDED AREA.
09	48-SY SEEDED AREA.
10	19-SY SEEDED AREA.
11	72-SY SEEDED AREA.
12	74-SY SEEDED AREA.
13	664-SY SEEDED AREA.
14	11-SY SEEDED AREA.
15	27-SY SEEDED AREA.
16	123-SY SEEDED AREA.
17	290-SY SEEDED AREA.
18	341-SY SEEDED AREA.
19	134-SY SEEDED AREA.
20	336-SY SEEDED AREA.
21	120-SY SEEDED AREA.
22	27-SY SEEDED AREA.
23	144-SY SEEDED AREA.
24	197-SY SEEDED AREA.
25	34-SY SEEDED AREA.
26	NO SEEDING IN AREA.
27	33-SY SEEDED AREA.
28	91-SY SEEDED AREA.
29	202-SY SEEDED AREA.
30	211-SY SEEDED AREA.
31	153-SY SEEDED AREA.

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

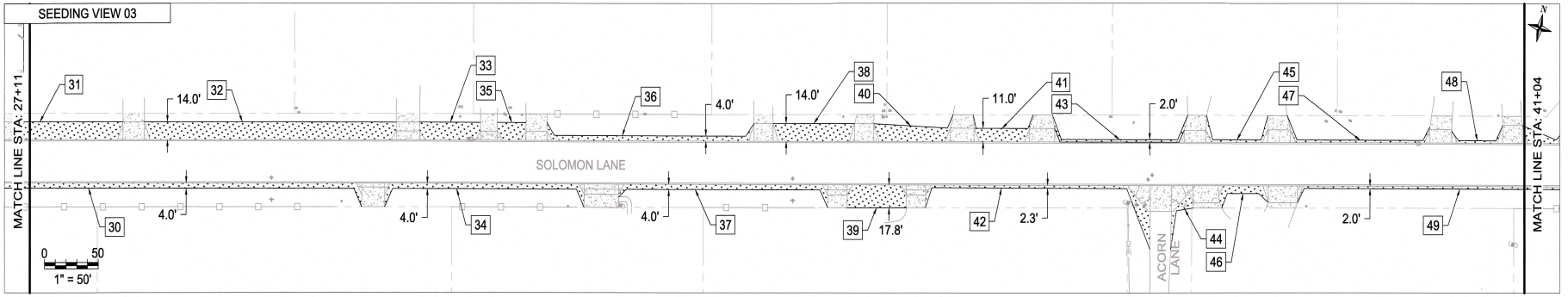
MIDLAND Engineering Services

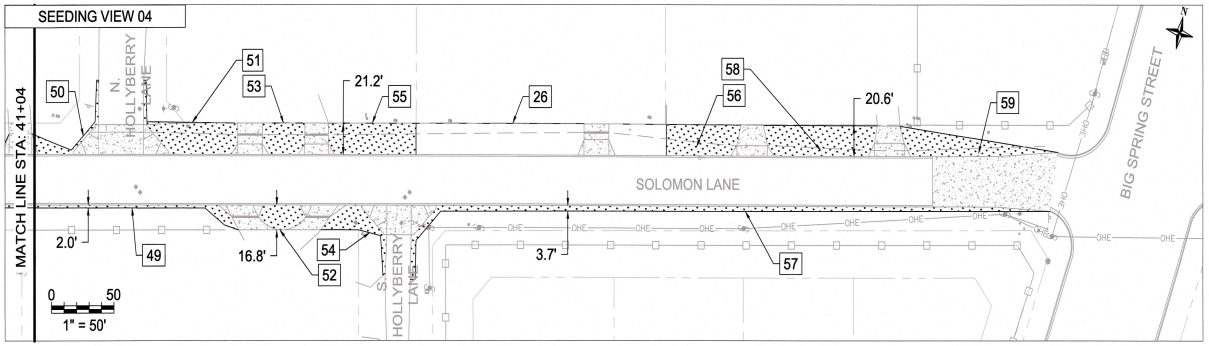
SOLOMON LANE PAVING BOND PROJECT

VEGETATION AND SEEDING 1 OF 3

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
March 24, 2022

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Pvng & Utils\03 DWG\SS1.1 DWG\Plans PVNG\CH34 SEED.dwg May 31, 2022 - 8:51am jslingston





VEGETATION AND SEEDING NOTES:

1. VEGETATION SEEDING AND WATERING:
   - i. THIS REFERS TO ALL PORTIONS OF SOLOMON LANE, LAZYWOOD LANE, WEEPING WILLOW LANE, AND MIDLAND DRAW DISTURBED BY CONSTRUCTION ACTIVITY FOR THIS PROJECT.
   - ii. REVEGETATE ALL AREAS AND SURFACES DISTURBED BY ANY CONSTRUCTION ACTIVITY THAT ARE SCHEDULED TO REMAIN NATURAL REGARDLESS OF WHETHER OR NOT THEY ARE WITHIN APPROVED PROJECT SITE OR WORK ZONE. NATURAL SURFACES ARE THOSE THAT WILL NOT RECEIVE A LAYER OF PAVEMENT, FLATWORK, STRUCTURE, OR OTHER IMPERVIOUS MATERIAL.
   - iii. REMOVE TOP SIX INCH (6") LAYER OF VEGETATION AND TOPSOIL EVENLY FOR ENTIRE DISTURBED AREA AND SET ASIDE DURING CONSTRUCTION.
   - iv. AFTER CONSTRUCTION PLACE SAVED VEGETATION AND TOPSOIL EVENLY ACROSS ENTIRE DISTURBED AREA AND RAKE SMOOTH. ADD ADDITIONAL TOPSOIL MATERIAL OF EQUAL OR BETTER QUALITY THAN ORIGINAL MATERIAL IF NECESSARY TO ACHIEVE A MINIMUM SIX INCH (6.0") TOPSOIL THICKNESS THROUGHOUT.
   - v. RAKE AREAS TO BE SEEDED TO ALLOW GOOD CONTACT BETWEEN SEEDS AND SOIL.
   - vi. UNIFORMLY DISTRIBUTE SEEDS BY SPREADER, BY HAND, OR BY OTHER EQUIVALENT METHOD.
   - vii. RAKE SEEDER AREA AGAIN AFTER SEEDING OCCURS SO THAT SEEDS ARE NOT LEFT EXPOSED ON SURFACE. RAKED SURFACE SHOULD BE RELATIVELY SMOOTH AND FLUSH WITH ADJACENT SURFACES.
   - viii. FERTILIZER IS TO BE PLACED UNIFORMLY OVER ALL SEEDED AREAS NO LESS THAN ONE (1) DAY AFTER SEEDS ARE PLACED.
   - ix. BEFORE PLANTING OPERATIONS BEGIN, FURNISH SEED TAGS FROM SEED SUPPLIER. SEED TAGS MUST SHOW PERCENT PURITY, PERCENT GERMINATION, AND DATE SEED WAS HARVESTED. SUBMIT SEED TAGS TO PROJECT ENGINEER FOR VERIFICATION OF APPROPRIATE POUNDS P.L.S./ACRE RATES.
   - x. TWO (2) TO THREE (3) DAYS AFTER FERTILIZER IS PLACED, SPRAY EVENLY WITH WATER EQUIVALENT TO A MINIMUM UNIFORM WATER VOLUME DEPTH OF 0.2-INCHES (0.2") FOR ENTIRE DISTURBED AREA AT A RATE OF NO LESS THAN ONCE (1) A DAY FOR TEN (10) CONSECUTIVE DAYS.
   - xi. PROVIDE SEED MIXTURES LISTED AT APPROPRIATE RATES DURING SPECIFIED SEASON:
     - a) SEED MIX TOTALING 130 LBS / ACRE, WHEN SEEDING BETWEEN OCTOBER AND FEBRUARY:

SEED TYPE 01:	SAHARA BERMUDA GRASS (UN-HULLED) CYNODON DACTYLON
MIN. % PURE LIVE SEED REQUIRED:	85%
POUNDS PURE LIVE SEED REQUIRED:	65 LBS / ACRE
SEED TYPE 02:	PERENNIAL RYE GRASS PINNACLE 2
MIN. % PURE LIVE SEED REQUIRED:	85%
POUNDS PURE LIVE SEED REQUIRED:	65 LBS / ACRE

     - b) SEED MIX TOTALING 20 LBS P.L.S. / ACRE, WHEN SEEDING BETWEEN MARCH AND SEPTEMBER:

SEED TYPE 01:	SAHARA BERMUDA GRASS (HULLED) CYNODON DACTYLON
MIN. % PURE LIVE SEED REQUIRED:	85%
POUNDS PURE LIVE SEED REQUIRED:	65 LBS / ACRE

     - c) NOTE THAT % PURE LIVE SEED = % PURITY X % GERMINATION.
     - d) WEED SEED IS NOT TO EXCEED 10% BY WEIGHT OF TOTAL PURE LIVE SEED AND OTHER MATERIAL IN THE MIXTURE. JOHNSON GRASS, NUT GRASS, OR OTHER NOXIOUS WEED SEED IS NOT ALLOWED.
     - e) IF SPECIFIED GRASS VARIETY IS NOT AVAILABLE, SUBMIT AVAILABLE SUBSTITUTION TO PROJECT ENGINEER FOR APPROVAL. PERMISSION FOR SUBSTITUTION WILL ONLY BE GRANTED AFTER PROJECT ENGINEER IS SATISFIED THAT SPECIFIED GRASS VARIETIES ARE NOT AVAILABLE.
     - f) DELIVER ALL FERTILIZER IN BAGS OR CONTAINERS CLEARLY LABELED SHOWING BAG ANALYSIS. PREFERRED ANALYSIS IS 18-3-4. APPLY FERTILIZER AT RATE THAT ACHIEVES NO LESS THAN 100 LBS N_2 / ACRE. APPLY FERTILIZER IN CONJUNCTION WITH SEEDING.
2. CONTRACTOR HAS SOLE RESPONSIBILITY FOR VEGETATING OR STABILIZING TO EXISTING OR BETTER CONDITION ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITY LOCATED OUTSIDE DESIGNATED PROJECT SITE OR APPROVED WORK ZONE AT CONTRACTOR'S SOLE EXPENSE.

VEGETATION AND SEEDING KEYED NOTES:

26	NO SEEDING IN AREA.
30	211-SY SEEDED AREA.
31	153-SY SEEDED AREA.
32	360-SY SEEDED AREA.
33	85-SY SEEDED AREA.
34	90-SY SEEDED AREA.
35	42-SY SEEDED AREA.
36	88-SY SEEDED AREA.
37	91-SY SEEDED AREA.
38	111-SY SEEDED AREA.
39	105-SY SEEDED AREA.
40	98-SY SEEDED AREA.
41	58-SY SEEDED AREA.
42	87-SY SEEDED AREA.
43	33-SY SEEDED AREA.
44	21-SY SEEDED AREA.
45	20-SY SEEDED AREA.
46	35-SY SEEDED AREA.
47	32-SY SEEDED AREA.
48	11-SY SEEDED AREA.
49	99-SY SEEDED AREA.
50	40-SY SEEDED AREA.
51	159-SY SEEDED AREA.
52	56-SY SEEDED AREA.
53	74-SY SEEDED AREA.
54	73-SY SEEDED AREA.
55	164-SY SEEDED AREA.
56	133-SY SEEDED AREA.
57	212-SY SEEDED AREA.
58	196-SY SEEDED AREA.
59	148-SY SEEDED AREA.

811 Know what's below. Call before you dig.

Rev. No.	Date	By	Description

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

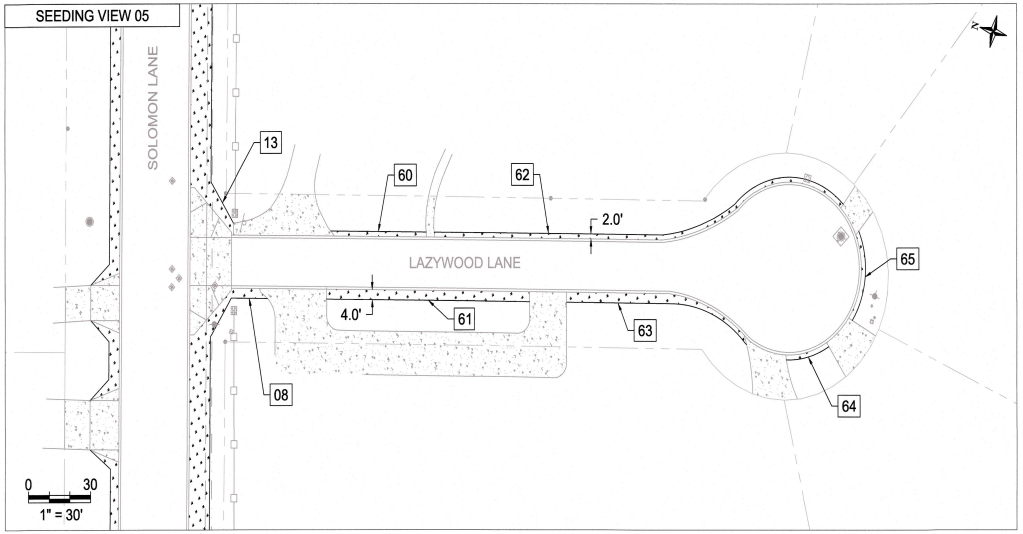
MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT
VEGETATION AND SEEDING 2 OF 3

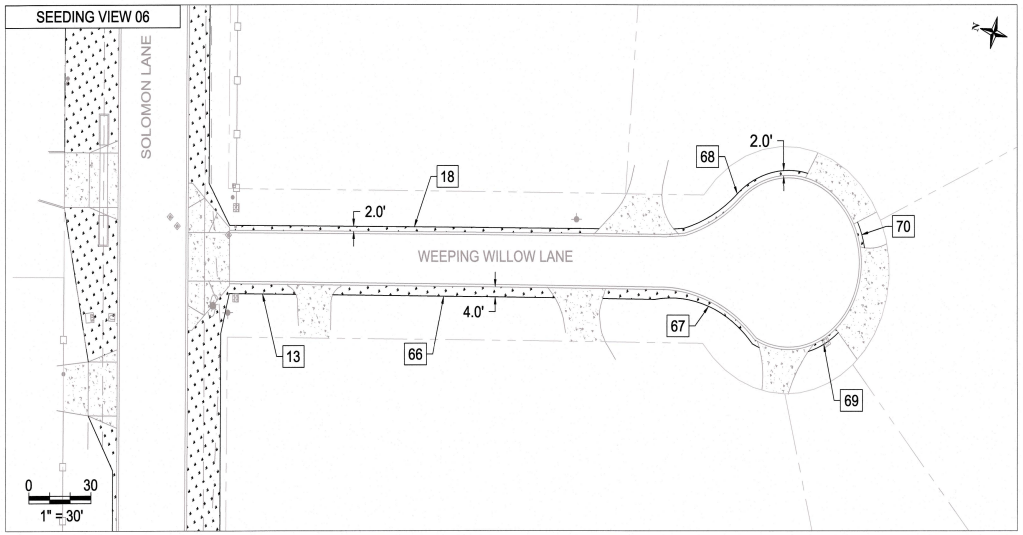
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31, 2022

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SEEDING VIEW 05



SEEDING VIEW 06



VEGETATION AND SEEDING KEYED NOTES:

08 272-SY SEEDED AREA.

13 664-SY SEEDED AREA.

18 341-SY SEEDED AREA.

60 10-SY SEEDED AREA.

61 44-SY SEEDED AREA.

62 46-SY SEEDED AREA.

63 33-SY SEEDED AREA.

64 5-SY SEEDED AREA.

65 8-SY SEEDED AREA.

66 47-SY SEEDED AREA.

67 26-SY SEEDED AREA.

68 16-SY SEEDED AREA.

69 4-SY SEEDED AREA.

70 3-SY SEEDED AREA.

VEGETATION AND SEEDING NOTES:

1. VEGETATION SEEDING AND WATERING:
   - i. THIS REFERS TO ALL PORTIONS OF SOLOMON LANE, LAZYWOOD LANE, WEEPING WILLOW LANE, AND MIDLAND DRAW DISTURBED BY CONSTRUCTION ACTIVITY FOR THIS PROJECT.
   - ii. REVEGETATE ALL AREAS AND SURFACES DISTURBED BY ANY CONSTRUCTION ACTIVITY THAT ARE SCHEDULED TO REMAIN NATURAL REGARDLESS OF WHETHER OR NOT THEY ARE WITHIN APPROVED PROJECT SITE OR WORK ZONE. NATURAL SURFACES ARE THOSE THAT WILL NOT RECEIVE A LAYER OF PAVEMENT, FLATWORK, STRUCTURE, OR OTHER IMPERVIOUS MATERIAL.
   - iii. REMOVE TOP SIX INCH (6") LAYER OF VEGETATION AND TOPSOIL EVENLY FOR ENTIRE DISTURBED AREA AND SET ASIDE DURING CONSTRUCTION.
   - iv. AFTER CONSTRUCTION PLACE SAVED VEGETATION AND TOPSOIL EVENLY ACROSS ENTIRE DISTURBED AREA AND RAKE SMOOTH. ADD ADDITIONAL TOPSOIL MATERIAL OF EQUAL OR BETTER QUALITY THAN ORIGINAL MATERIAL IF NECESSARY TO ACHIEVE A MINIMUM SIX INCH (6.0") TOPSOIL THICKNESS THROUGHOUT.
   - v. RAKE AREAS TO BE SEEDED TO ALLOW GOOD CONTACT BETWEEN SEEDS AND SOIL.
   - vi. UNIFORMLY DISTRIBUTE SEEDS BY SPREADER, BY HAND, OR BY OTHER EQUIVALENT METHOD.
   - vii. RAKE SEEDER AREA AGAIN AFTER SEEDING OCCURS SO THAT SEEDS ARE NOT LEFT EXPOSED ON SURFACE. RAKED SURFACE SHOULD BE RELATIVELY SMOOTH AND FLUSH WITH ADJACENT SURFACES.
   - viii. FERTILIZER IS TO BE PLACED UNIFORMLY OVER ALL SEEDED AREAS NO LESS THAN ONE (1) DAY AFTER SEEDS ARE PLACED.
   - ix. BEFORE PLANTING OPERATIONS BEGIN, FURNISH SEED TAGS FROM SEED SUPPLIER. SEED TAGS MUST SHOW PERCENT PURITY, PERCENT GERMINATION, AND DATE SEED WAS HARVESTED. SUBMIT SEED TAGS TO PROJECT ENGINEER FOR VERIFICATION OF APPROPRIATE POUNDS P.L.S./ACRE RATES.
   - x. TWO (2) TO THREE (3) DAYS AFTER FERTILIZER IS PLACED, SPRAY EVENLY WITH WATER EQUIVALENT TO A MINIMUM UNIFORM WATER VOLUME DEPTH OF 0.2-INCHES (0.2") FOR ENTIRE DISTURBED AREA AT A RATE OF NO LESS THAN ONCE (1) A DAY FOR TEN (10) CONSECUTIVE DAYS.
   - xi. PROVIDE SEED MIXTURES LISTED AT APPROPRIATE RATES DURING SPECIFIED SEASON:

     a) SEED MIX TOTALING 130 LBS / ACRE, WHEN SEEDING BETWEEN OCTOBER AND FEBRUARY:

SEED TYPE 01:	SAHARA BERMUDA GRASS (UN-HULLED) CYNODON DACTYLON
MIN. % PURE LIVE SEED REQUIRED:	85%
POUNDS PURE LIVE SEED REQUIRED:	65 LBS / ACRE
SEED TYPE 02:	PERENNIAL RYE GRASS PINNACLE 2
MIN. % PURE LIVE SEED REQUIRED:	85%
POUNDS PURE LIVE SEED REQUIRED:	65 LBS / ACRE

     b) SEED MIX TOTALING 20 LBS P.L.S. / ACRE, WHEN SEEDING BETWEEN MARCH AND SEPTEMBER:

SEED TYPE 01:	SAHARA BERMUDA GRASS (HULLED) CYNODON DACTYLON
MIN. % PURE LIVE SEED REQUIRED:	85%
POUNDS PURE LIVE SEED REQUIRED:	65 LBS / ACRE

     c) NOTE THAT % PURE LIVE SEED = % PURITY X % GERMINATION.

     d) WEED SEED IS NOT TO EXCEED 10% BY WEIGHT OF TOTAL PURE LIVE SEED AND OTHER MATERIAL IN THE MIXTURE. JOHNSON GRASS, NUT GRASS, OR OTHER NOXIOUS WEED SEED IS NOT ALLOWED.

     e) IF SPECIFIED GRASS VARIETY IS NOT AVAILABLE, SUBMIT AVAILABLE SUBSTITUTION TO PROJECT ENGINEER FOR APPROVAL. PERMISSION FOR SUBSTITUTION WILL ONLY BE GRANTED AFTER PROJECT ENGINEER IS SATISFIED THAT SPECIFIED GRASS VARIETIES ARE NOT AVAILABLE.

     f) DELIVER ALL FERTILIZER IN BAGS OR CONTAINERS CLEARLY LABELED SHOWING BAG ANALYSIS. PREFERRED ANALYSIS IS 18-3-4. APPLY FERTILIZER AT RATE THAT ACHIEVES NO LESS THAN 100 LBS N_2 / ACRE. APPLY FERTILIZER IN CONJUNCTION WITH SEEDING.

2. CONTRACTOR HAS SOLE RESPONSIBILITY FOR VEGETATING OR STABILIZING TO EXISTING OR BETTER CONDITION ANY AREAS DISTURBED BY CONSTRUCTION ACTIVITY LOCATED OUTSIDE DESIGNATED PROJECT SITE OR APPROVED WORK ZONE AT CONTRACTOR'S SOLE EXPENSE.

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:30
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT

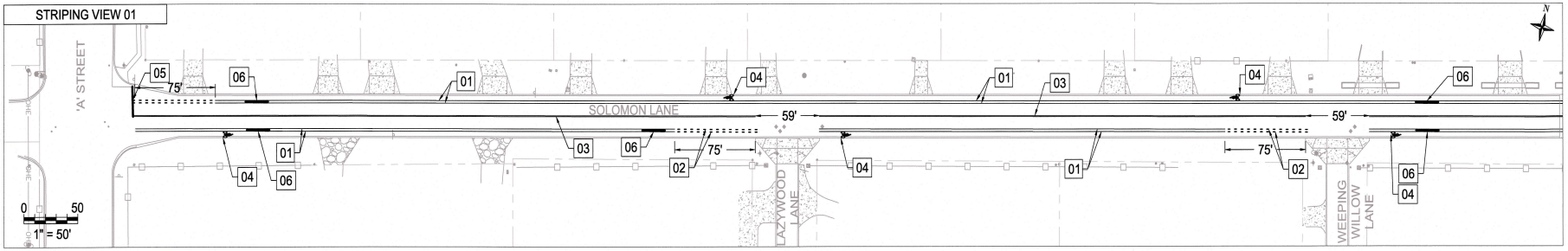
VEGETATION AND SEEDING 3 OF 3

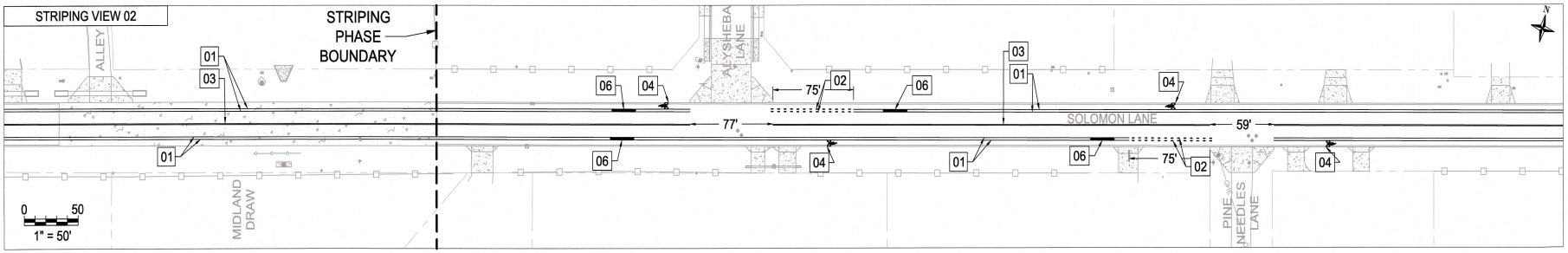
STATE OF TEXAS JOSHUA C. FERGUSON 117692 LICENSED PROFESSIONAL ENGINEER 5/31/22

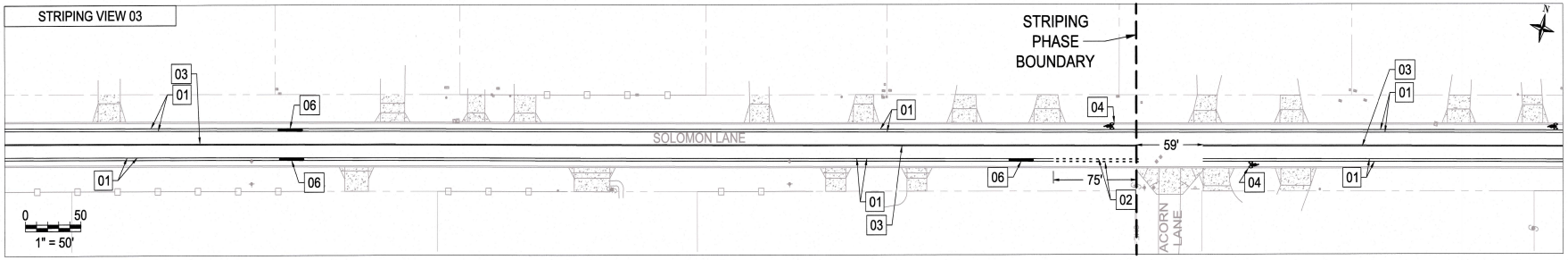
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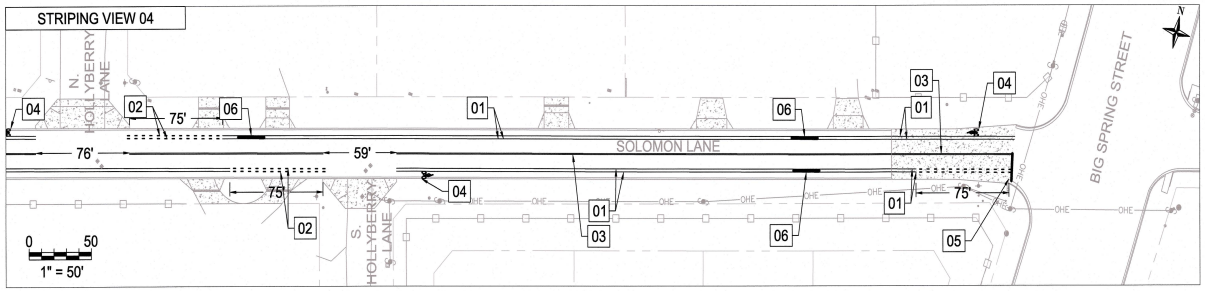
OF 64

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PAVEMENT MARKING NOTES:

A. ALL PAVEMENT MARKING WORK SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD DRAWINGS AND SPECIFICATIONS OF THE TEXAS DEPARTMENT OF TRANSPORTATION UNLESS OTHERWISE SHOWN ON THESE PLANS OR DIRECTED BY THE ENGINEER.

B. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL TEMPORARY MARKER TABS FROM PROJECT.

C. PERMANENT PAVEMENT MARKINGS ARE TO BE THERMOPLASTIC IN ACCORDANCE WITH TXDOT ITEM 666, TYPE I, FOR LONG-LINE MARKINGS, AND EITHER ITEM 666, TYPE I, OR ITEM 668 FOR SHORT-LINE AND SYMBOL MARKINGS.

D. DO NOT PAINT ANY PAVEMENT MARKINGS.

E. CONTRACTOR IS TO STRIPE EACH PHASE OF PROJECT INDICATED ON THIS SHEET WITH 20 DAYS OF PHASE'S PAVEMENT COMPLETION.

PAVEMENT KEYED NOTES:

01 REFL PAV MRK TY I (W) (4 IN) (SLD)

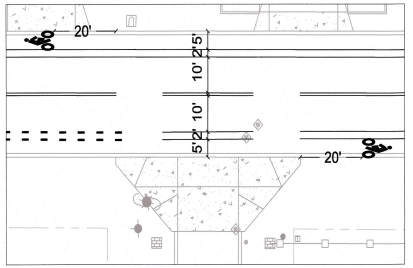
02 REFL PAV MRK TY I (W) (4 IN) (DOT)

03 REFL PAV MRK TY I (Y) (4 IN) (SLD/SLD)

04 REFL PAV MRK TY I (W) (BIKE LANE SYMBOL)

05 REFL PAV MRK TY I (W) (24 IN) (SLD)

06 RUBBER MEDIAN SEE DETAIL D04, SHEET 59.



TYPICAL PAVEMENT MARKING DIMENSIONS
N.T.S.

PACKET 4.372 August 9, 2022

811 Know what's below. Call before you dig.

Description	Date	By

Rev. No.	Date

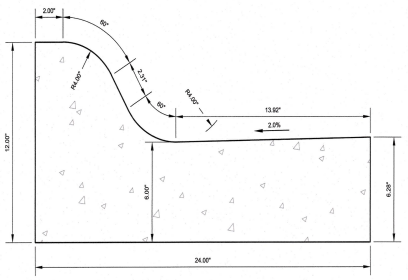
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CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE: 1:50
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT
STRIPING PLAN

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
MAY 24, 2022

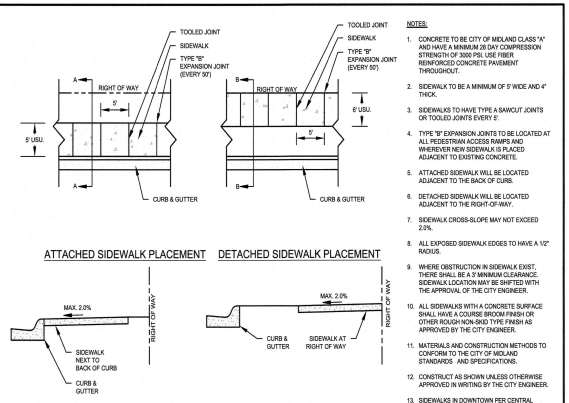
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NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

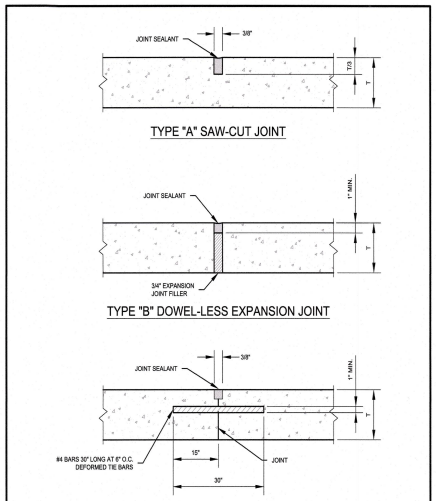
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TYPE A STANDARD CURB AND GUTTER					205



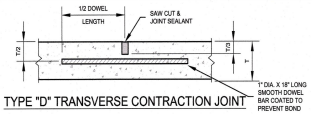
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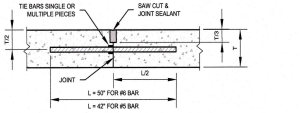
1. CONCRETE TO BE CITY OF MIDLAND CLASS "A" AND HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SIDEWALK TO BE A MINIMUM OF 5' WIDE AND 4" THICK.
3. SIDEWALKS TO HAVE TYPE A SAWCUT JOINTS OR TOOLED JOINTS EVERY 5'.
4. TYPE "B" EXPANSION JOINTS TO BE LOCATED AT ALL PEDESTRIAN ACCESS RAMPS AND WHEREVER NEW SIDEWALK IS PLACED ADJACENT TO EXISTING CONCRETE.
5. ATTACHED SIDEWALK WILL BE LOCATED ADJACENT TO THE BACK OF CURB.
6. DETACHED SIDEWALK WILL BE LOCATED ADJACENT TO THE RIGHT-OF-WAY.
7. SIDEWALK CROSS-SLOPE MAY NOT EXCEED 2.0%.
8. ALL EXPOSED SIDEWALK EDGES TO HAVE A 1/2" RADIUS.
9. WHERE OBSTRUCTION IN SIDEWALK EXIST, THERE SHALL BE A 3' MINIMUM CLEARANCE. SIDEWALK LOCATION MAY BE SHIFTED WITH THE APPROVAL OF THE CITY ENGINEER.
10. ALL SIDEWALKS WITH A CONCRETE SURFACE SHALL HAVE A COURSE BROOM FINISH OR OTHER ROUGH NON-SKID TYPE FINISH AS APPROVED BY THE CITY ENGINEER.
11. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
12. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.
13. SIDEWALKS IN DOWNTOWN PER CENTRAL BUSINESS DISTRICT POLICY.

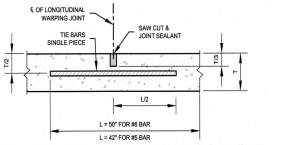
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STANDARD SIDEWALK					225



DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
TYPICAL CONCRETE JOINTS					234(A)



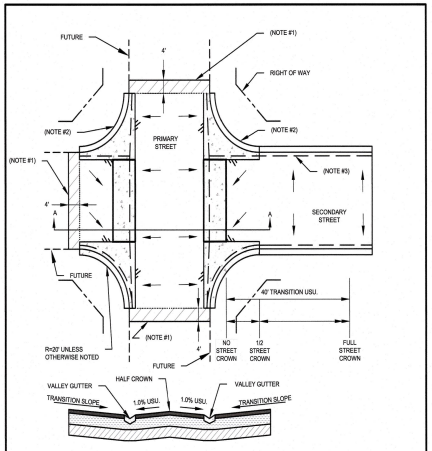




NOTES:

1. JOINTING , DOWEL, AND TIE BAR DESIGN REQUIREMENTS ARE SUBJECT TO CHANGE FOR ARTERIAL OR HIGHER CLASSIFICATION ROADS IF DEEMED NECESSARY BY THE CITY ENGINEER.
2. TYPICAL CONCRETE PAVEMENT JOINT SPACING IS TO BE NO LESS THAN 10' X 10' AND NO MORE THAT 15' X 15'.
3. DOWELS ARE TO BE SPACED AT 12" INTERVALS WITH MINIMUM 18" SEPARATION FROM PARALLEL JOINTS OR EDGES OF PAVEMENT.
4. TIE BARS ARE TO BE SET AT 24" INTERVALS WITH MINIMUM 18" SEPARATION FROM PARALLEL JOINTS OR EDGES OF PAVEMENT.
5. ALL JOINT SEALANT TO BE TxDOT DMS-6310 SL-2 OR APPROVED EQUAL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

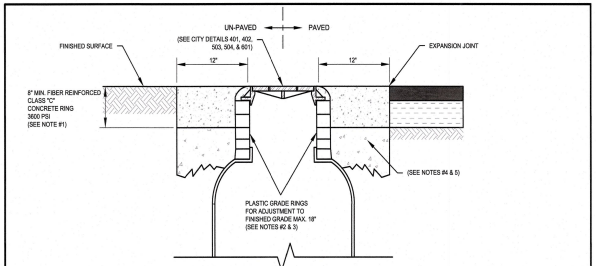
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
TYPICAL CONCRETE JOINTS					234(B)



NOTES:

1. NO HEADER WILL BE USED IF ROAD ENDS AT INTERSECTION. INSTEAD EXTEND BASE AND SURFACE 4' BEYOND END OF CURB.
2. WARP GUTTER SO THAT IT SLOPES TOWARDS THE VALLEY GUTTER.
3. FLOW PATH LINES
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
TYPICAL LOCAL/COLLECTOR CROWN TRANSITION					235



NOTES:

1. INSTALL 12" MIN. FIBER REINFORCED CLASS "C" CONCRETE RING, 3600 PSI, WHEN MANHOLE IS LOCATED IN AN ARTERIAL R.O.W.
2. GRADE RINGS TO MEET ASTM STANDARD A48 AND TO BE 2", 4", OR 6" THICKNESS AS REQUIRED. INSTALL ASPHALT TAR IN THICK, UNIFORM COATING OVER ALL OUTER ADJUSTMENT RING SURFACES AND JOINTS.
3. ENGINEERING SERVICES REPRESENTATIVE AND UTILITY SERVICES REPRESENTATIVE MAY ALLOW GREATER ADJUSTMENT RING DEPTH TO ACCOMMODATE PAVING STRUCTURES.
4. REMOVE ALL MATERIAL EXCAVATED FROM SITE AND EXCAVATION.
5. FILL ANY OVER-EXCAVATION WITH FLOWABLE FILL 2-SACK (2-SACK = 188 LBS/CY, PORTLAND CEMENT).
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
NEW MANHOLE RING & COVER ADJUSTMENT					318

POCKET

August 9, 2022

Know what's below. Call before you dig.

No.	Description	By	Date

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

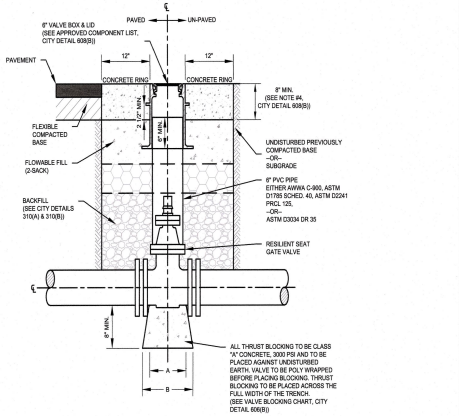
SOLOMON LANE PAVING BOND PROJECT

DETAILS 1 OF 8

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31, 2022

57
OF 64

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Pvng & Utils\05 DWG\PS\1 DWG\Plans PVNG\C16 DET.dwg May 31, 2022 - 12:33pm pkingston



DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	TYPICAL VALVE AND VALVE BOX		608(A)
APPROVED: MCC			

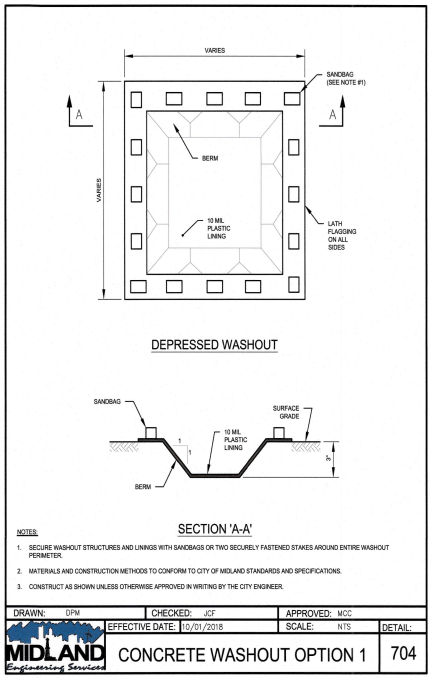
APPROVED COMPONENT LIST			
NO.	VALVES	VALVE COVERS	VALVE BOX
1	MUELLER 2360 MU	MUELLER 2360 FL X FL	BASS & HAYS STANDARD 360-1 "SHORTY"
2	M & H 4067 MU	M & H 4067-0	OR APPROVED EQUAL
3	CLOW 2838 MU	CLOW 2840 FL X FL	
4	OR APPROVED EQUAL	OR APPROVED EQUAL	

VALVE BLOCKING CHART		
PIPE SIZE	A	B
4"	5.0"	10.5"
6"	6.5"	1'-.0"
8"	6.5"	1'-.0"
10"	8.0"	1'-1.0"
12"	8.5"	1'-2.0"

NOTES:

1. FOR VALVES ON WATER MAIN PIPES LARGER THAN 12" SEE CITY DETAIL 609.
2. SETTING VALVE BOX TO GRADE MAY REQUIRE ADDING PVC PIPE. IF ADDITIONAL PIPE IS REQUIRED, USE BELL SECTION WITH GASKET AND SET BELL DOWN OVER EXISTING PIPE RISER. A GASKETED SELF CENTERING COLLAR MAY BE USED IN LIEU OF THE BELL SECTION.
3. CONCRETE RING TO BE CITY OF MIDLAND CLASS "C", 3900 PSI, UNLESS OTHERWISE NOTED.
4. USE FIBER REINFORCEMENT FOR ALL CONCRETE , WHETHER PAVEMENT OR THRUST BLOCKING.
5. 12" MINIMUM FOR CONCRETE RING IN AN ARTERIAL ROADWAY.
6. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT.) REQUIRED BENEATH ALL CONCRETE RINGS.
7. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT.) REQUIRED FOR ALL OVER EXCAVATION BACKFILL.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

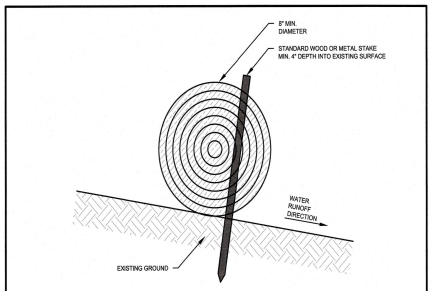
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CHECKED: JCF	TYPICAL VALVE AND VALVE BOX DETAILS		608(B)
APPROVED: MCC			



NOTES:

1. SECURE WASHOUT STRUCTURES AND LININGS WITH SANDBAGS OR TWO SECURELY FASTENED STAKES AROUND ENTIRE WASHOUT PERIMETER.
2. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

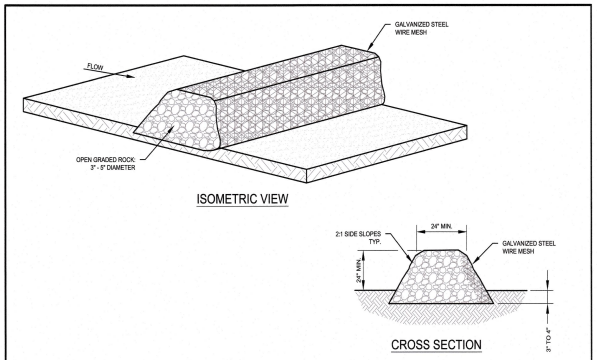
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CONCRETE WASHOUT OPTION 1		704



NOTES:

1. THIS DETAIL IS TO USED FOR SHEET FLOW CONDITIONS ONLY. DO NOT USE FILTER SOCK FOR POINT FLOW OR CONCENTRATED FLOW CONDITIONS.
2. DO NOT USE FILTER SOCK FOR SHEET FLOW WATERSHEDS LARGER THAN ONE (1) ACRE.
3. USE POLYPROPYLENE NETTING, BURLAP, OR JUTE FABRIC TO CONSTRUCT THE FILTER SOCK.
4. FILL FILTER SOCK WITH STRAW, HAY, COCONUT FIBER, OR COMPOSITE MATERIAL.
5. PLACE STAKING EVERY THREE (3) TO FOUR (4) FEET AT A MINIMUM.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

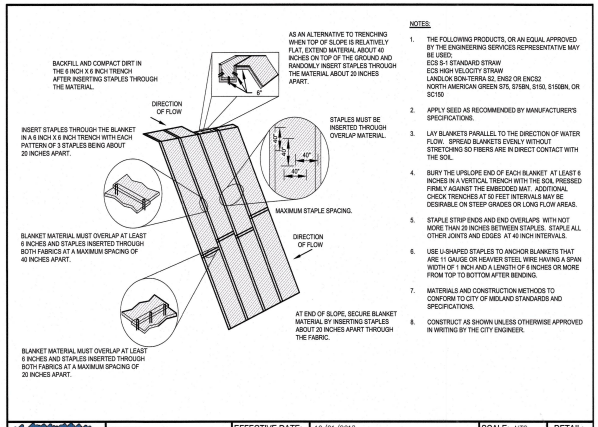
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	SOCKET FILTER SOCK		707



NOTES:

1. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
2. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	ROCK FILTER DAM		708
APPROVED: MCC			



NOTES:

1. THE FOLLOWING PRODUCTS, OR AN EQUAL APPROVED BY THE ENGINEERING SERVICES REPRESENTATIVE MAY BE USED:
   ECS S-1 STANDARD STRAW
   ECS HIGH VELOCITY STRAW
   LANDLOK BON-TERRA S2, ENS2 OR ENCS2
   NORTH AMERICAN GREEN S75, S75BN, S150, S150BN, OR SC150
2. APPLY SEED AS RECOMMENDED BY MANUFACTURER'S SPECIFICATIONS.
3. LAY BLANKETS PARALLEL TO THE DIRECTION OF WATER FLOW. SPREAD BLANKETS EVENLY WITHOUT STRETCHING SO FIBERS ARE IN DIRECT CONTACT WITH THE SOIL.
4. BURY THE UPSLOPE END OF EACH BLANKET AT LEAST 6 INCHES IN A VERTICAL TRENCH WITH THE SOIL PRESSED FIRMLY AGAINST THE EMBEDDED MAT. ADDITIONAL CHECK TRENCHES AT 50 FEET INTERVALS MAY BE DESIRABLE ON STEEP GRADES OR LONG FLOW AREAS.
5. STAPLE STRIP ENDS AND END OVERLAPS WITH NOT MORE THAN 20 INCHES BETWEEN STAPLES. STAPLE ALL OTHER JOINTS AND EDGES AT 40 INCH INTERVALS.
6. USE U-SHAPED STAPLES TO ANCHOR BLANKETS THAT ARE 11 GAUGE OR HEAVIER STEEL WIRE HAVING A SPAN WIDTH OF 1 INCH AND A LENGTH OF 6 INCHES OR MORE FROM TOP TO BOTTOM AFTER BENDING.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	EROSION CONTROL BLANKET AND VEGETATION		711
APPROVED: MCC			

August 9, 2022

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

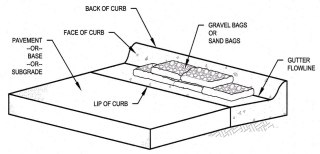
DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING
BOND PROJECT
DETAILS
2 OF 8

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED
PROFESSIONAL ENGINEER
MAY 31, 2022

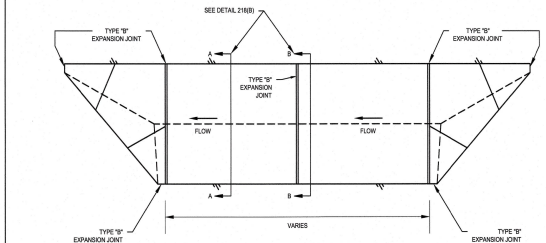
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NOTES:

1. FILL BAGS TO 80% CAPACITY WITH EITHER CLEAN GRAVEL OR CLEAN SAND.
2. GRAVEL TO BE NO LESS THAN 1" DIAMETER OR GREATER THAN 2" DIAMETER.
3. PLACE BAGS WITH BAG OPENINGS SECURED AND FACE UP, AND SO THAT EACH BAG IS FLAT AND HAS THE GREATEST POSSIBLE SURFACE AREA CONTACT WITH THE CURB.
4. PLACE BAGS AGAINST THE FACE-OF-CURB AND DO NOT PLACE BAGS BEYOND THE LIP-OF-CURB.
5. DO NOT BLOCK ADA RAMPS OR WALKWAYS WITH BAGS.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 712
	CURB GRAVEL OR SAND BAGS		

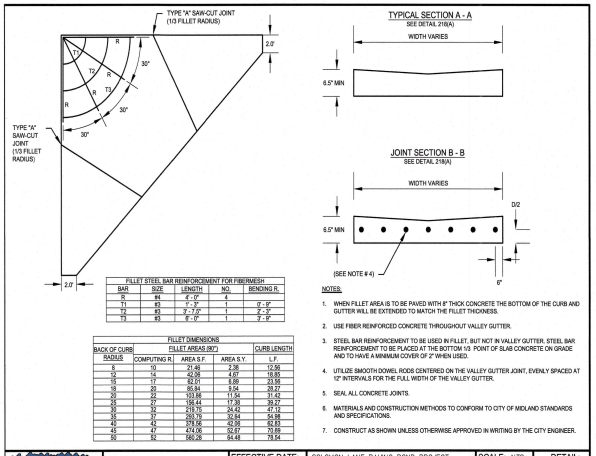


PLAN VIEW

NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. CONCRETE FILLET AREA TO BE PLACED WITH INTEGRAL CURB.
3. SEAL ALL CONCRETE JOINTS.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: PAK	EFFECTIVE DATE: SOLOMON LANE PAVING BOND PROJECT	SCALE: NTS	DETAIL:
CHECKED: JCF	SOLOMON LANE		D01
APPROVED: JCF	FILLET AND VALLEY GUTTER		



FILLET STEEL BAR REINFORCEMENT FOR FIBERMESH

BAR	SIZE	LENGTH	NO.	BENDING R.
R	#4	4' - 0"	4	
T1	#3	1' - 3"	1	0' - 9"
T2	#3	3' - 7.5"	1	2' - 3"
T3	#3	6' - 0"	1	3' - 9"

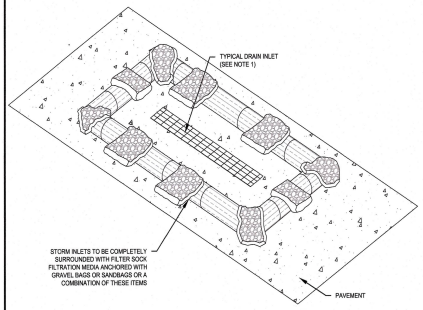
FILLET DIMENSIONS

BACK OF CURB RADIUS	FILLET AREAS (90°)			CURB LENGTH
	COMPUTING R.	AREA S.F.	AREA S.Y.	L.F.
8	10	21.46	2.38	12.56
12	14	42.56	4.67	18.85
15	17	62.01	6.88	23.56
18	20	85.84	9.54	28.27
20	22	103.66	11.54	31.42
25	27	156.44	17.38	39.27
30	32	219.75	24.42	47.12
35	37	293.79	32.64	54.98
40	42	378.56	42.06	62.83
45	47	474.06	52.67	70.69
50	52	580.28	64.48	78.54

NOTES:

1. WHEN FILLET AREA IS TO BE PAVED WITH 8" THICK CONCRETE THE BOTTOM OF THE CURB AND GUTTER WILL BE EXTENDED TO MATCH THE FILLET THICKNESS.
2. USE FIBER REINFORCED CONCRETE THROUGHOUT VALLEY GUTTER.
3. STEEL BAR REINFORCEMENT TO BE USED IN FILLET, BUT NOT IN VALLEY GUTTER. STEEL BAR REINFORCEMENT TO BE PLACED AT THE BOTTOM 1/3 POINT OF SLAB CONCRETE ON GRADE AND TO HAVE A MINIMUM COVER OF 2" WHEN USED.
4. UTILIZE SMOOTH DOWEL RODS CENTERED ON THE VALLEY GUTTER JOINT, EVENLY SPACED AT 12" INTERVALS FOR THE FULL WIDTH OF THE VALLEY GUTTER.
5. SEAL ALL CONCRETE JOINTS.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: PAK	EFFECTIVE DATE: SOLOMON LANE PAVING BOND PROJECT	SCALE: NTS	DETAIL:
CHECKED: JCF	SOLOMON LANE		D02
APPROVED: JCF	FILLET AND VALLEY GUTTER		

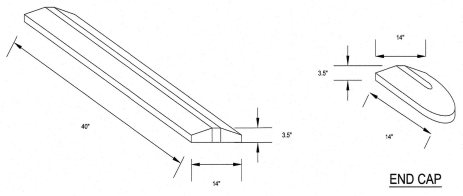


FILTER SOCK AND GRAVEL BAGS OR SANDBAGS

NOTES:

1. THIS DESCRIBES GRATED MANHOLE OR JUNCTION BOX COVERS AS WELL AS SLOT DRAIN INLETS.
2. FILL BAGS TO 80% CAPACITY WITH CLEAN GRAVEL OR CLEAN SAND.
3. PLACE BAGS WITH BAG OPENINGS SECURED AND FACE UP, AND SO THAT EACH BAG IS FLAT AND HAS THE GREATEST POSSIBLE SURFACE AREA CONTACT WITH THE SURFACE.
4. GRAVEL TO BE NO LESS THAN 1" DIAMETER OR GREATER THAN 2" DIAMETER.
5. PLACE BAGS AT INCREMENTS OF 5.0' ALONG FILTER SOCK OUTER EDGE.
6. FILTER SOCK DIAMETER TO BE AT A MINIMUM OF 9".
7. USE POLYPROPYLENE NETTING, BURLAP, OR JUTE FABRIC TO CONSTRUCT THE FILTER SOCK.
8. FILL FILTER SOCK WITH STRAW, HAY, COCONUT FIBER, OR COMPOSITE MATERIAL.
9. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS
10. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: PAK	CHECKED: JCF	APPROVED: JCF	
MIDLAND Engineering Services	EFFECTIVE DATE: SOLOMON LANE PAVING	SCALE: NTS	DETAIL: D03
	ROAD INLET PROTECTION		



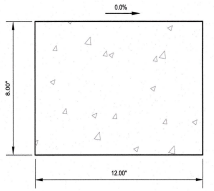
CENTER MODULE

END CAP

NOTES:

1. RUBBERFORM RECYCLED PRODUCTS, LLC. (WWW.RUBBERFORM.COM) "BUS LANE CURB" MODEL NUMBER RF-BLC40WHT (CENTER MODULE) AND RF-BLCE0WHT (END CAP).
2. EACH RUBBER CURB ASSEMBLY SHALL CONSIST OF (1) CENTER MODULE AND (2) END CAPS, INCLUDING ALL NECESSARY INSTALLATION HARDWARE AND ACCESSORIES. ALL MODULES SHALL HAVE FACTORY-INSTALLED WHITE REFLECTIVE STRIPES.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: PAK	EFFECTIVE DATE: SOLOMON LANE PAVING PROJECT	SCALE: NTS	DETAIL:
CHECKED: TS	RUBBER CURB DETAIL		D04
APPROVED: TS			



NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: PAK	SCALE: SOLOMON LANE PAVING BOND PROJECT	SCALE: NTS	DETAIL:
CHECKED: JCF	RIBBON CURB DETAIL		D05
APPROVED: JEO			

811 Know what's below. Call before you dig.

Description	By	Date	Rev. No.

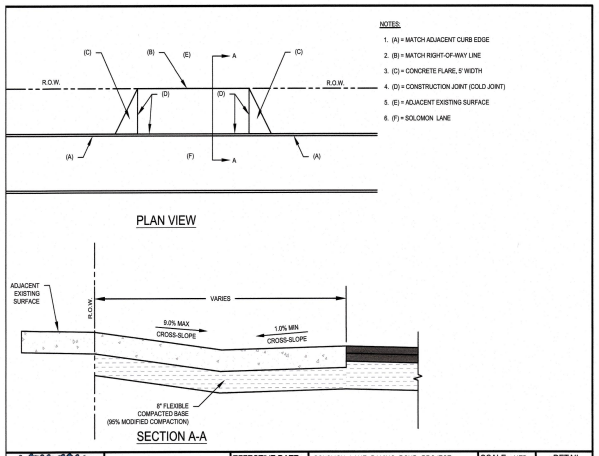
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APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT
DETAILS 3 OF 8

STATE OF TEXAS
MAY 24 2022
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER

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NOTES:

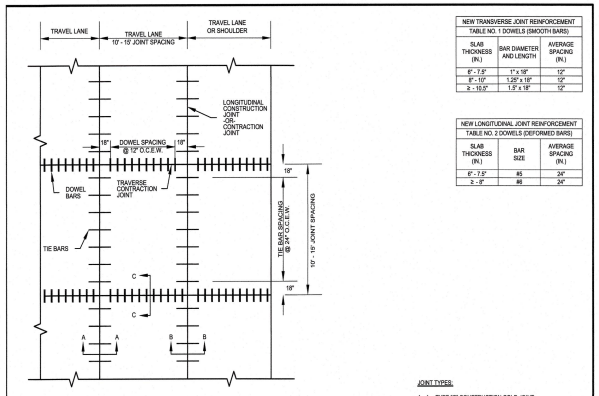
1. (A) = MATCH ADJACENT CURB EDGE
2. (B) = MATCH RIGHT-OF-WAY LINE
3. (C) = CONCRETE FLARE, 5' WIDTH
4. (D) = CONSTRUCTION JOINT (COLD JOINT)
5. (E) = ADJACENT EXISTING SURFACE
6. (F) = SOLOMON LANE

MIDLAND Engineering Services	DRAWN: PAK CHECKED: JCF APPROVED: JCF	EFFECTIVE DATE: SOLOMON LANE PAVING BOND PROJECT	SCALE: NTS	DETAIL: D06
		SOLOMON LANE TYPICAL DRIVEWAY APPROACH		

NOTES:

1. REMOVE AND REPLACE EXISTING CURB AND GUTTER TO NEAREST JOINT IF LESS THAN 4' SECTION OF EXISTING CURB AND GUTTER REMAINS AFTER DRIVEWAY APPROACH PLACED.
2. DRIVEWAY CURB OPENING MAY BE CLOSER THAN 5' FROM PROPERTY LINE WITH ADJOINING PROPERTY OWNER'S CONSENT. CONSENT FORMS ARE AVAILABLE IN ENGINEERING SERVICES. APPROVAL FROM ADJOINING PROPERTY OWNER DOES NOT GUARANTEE ENGINEERING SERVICES APPROVAL.
3. THIS DETAIL ONLY APPLIES WHEN ADJACENT PROPERTY IS NOT RIGHT OF WAY. A MINIMUM 10' IS REQUIRED BETWEEN RIGHT OF WAY AND DRIVEWAY CURB OPENING.
4. MATCH CURB/PAVEMENT EDGE ELEVATION ON EACH END OF DRIVEWAY APPROACH.
5. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
6. CONTRACTOR, AT THEIR OPTION, MAY ELECT TO PLACE 8" CONCRETE PAVEMENT WITHOUT FLEXIBLE BASE RATHER THAN 6" CONCRETE WITH COMPACTED FLEXIBLE BASE.
7. OVER-EXCAVATION BELOW THE GRADE REQUIRED TO CORRECTED BY PLACING EXTRA CONCRETE AT THE TIME THE DRIVEWAY IS PLACED OR BY PLACING ADDITIONAL CITY STANDARD FLEXIBLE COMPACTED BASE.
8. FLEXIBLE COMPACTED BASE TO BE PLACE IN LIFTS NO THICKER THAN 6".
9. SEAL ALL CONCRETE JOINTS.
10. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
11. CONSTRUCT AS SHOWN UNLESS OTHER WISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: PAK CHECKED: JCF APPROVED: JCF	EFFECTIVE DATE: SOLOMON LANE PAVING BOND PROJECT	SCALE: NTS	DETAIL: D07
		SOLOMON LANE TYPICAL DRIVEWAY APPROACH		



TYPICAL NEW CONCRETE PAVEMENT JOINT LAYOUT
NEW CONCRETE PAVEMENT TO NEW CONCRETE PAVEMENT
PLAN VIEW (NOT TO SCALE)

NEW TRANSVERSE JOINT REINFORCEMENT		
TABLE NO. 1 DOWELS (SMOOTH BARS)		
SLAB THICKNESS (IN.)	BAR DIAMETER AND LENGTH	AVERAGE SPACING (IN.)
6" - 7.5"	1" x 18"	12"
8" - 10"	1.25" x 18"	12"
2 - 10.5"	1.5" x 18"	12"

NEW LONGITUDINAL JOINT REINFORCEMENT		
TABLE NO. 2 DOWELS (DEFORMED BARS)		
SLAB THICKNESS (IN.)	BAR SIZE	AVERAGE SPACING (IN.)
6" - 7.5"	#5	24"
2 - 8"	#6	24"

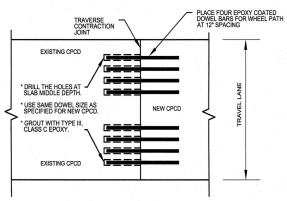
JOINT TYPES:

A - A TYPE "C" CONSTRUCTION COLD JOINT

B - B TYPE "F" LONGITUDINAL CONTRACTION SAW-CUT JOINT

C - C TYPE "D" TRANSVERSE CONTRACTION JOINT

MIDLAND Engineering Services	DRAWN: PAK CHECKED: JCF APPROVED: JEO	EFFECTIVE DATE: SOLOMON LANE PAVING BOND PROJECT	SCALE: NTS	DETAIL: D08(A)
		TYPICAL CONCRETE JOINT LAYOUT		

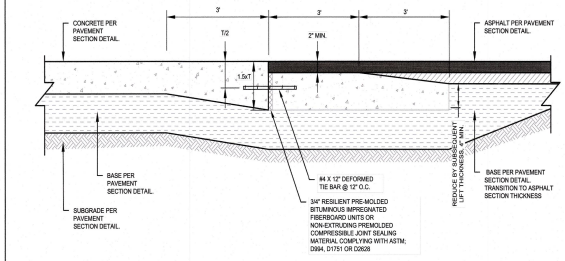


EXISTING TO NEW CONCRETE PAVEMENT TRAVERS JOINT LAYOUT
EXISTING CONCRETE PAVEMENT TO NEW CONCRETE PAVEMENT
PLAN VIEW (NOT TO SCALE)

NOTES:

1. SEE CITY OF MIDLAND TYPICAL CONCRETE JOINTS DETAILS FOR JOINT SPECIFIC STANDARDS AND REQUIREMENTS.
2. CONCRETE PAVEMENT PLACED IS TO BE FIBER REINFORCED AT A RATE OF 3.0-LBS PER CUBIC YARD IN ADDITION TO REBAR REINFORCEMENT.
3. REBAR IN NEW CONCRETE PAVEMENT TO BE PLACED 2.5" FROM BOTTOM OF CONCRETE PAVEMENT SLAB.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: PAK CHECKED: JCF APPROVED: JEO	EFFECTIVE DATE: SOLOMON LANE PAVING BOND PROJECT	SCALE: NTS	DETAIL: D08(B)
		TYPICAL CONCRETE JOINT LAYOUT		



NOTES:

1. CONCRETE MATERIALS AND REINFORCEMENT PER THE PAVEMENT SECTION DETAIL.
2. THE MAXIMUM CONTROL JOINT SPACING SHOULD BE HELD AT A RANGE FROM 24 TO 36 TIMES THE SLAB THICKNESS, WITH A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: PAK CHECKED: JCF APPROVED: JEO	EFFECTIVE DATE: SOLOMON LANE PAVING BOND PROJECT	SCALE: NTS	DETAIL: D09
		TYPICAL PAVEMENT SLEEPER SLAB TRANSITION		

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Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
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PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

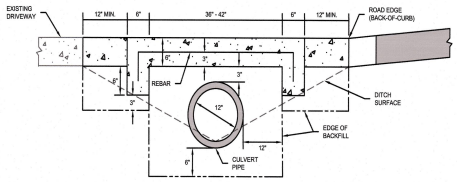
SOLOMON LANE PAVING BOND PROJECT
DETAILS
4 OF 8

STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
MAY 31, 2022

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OF 64

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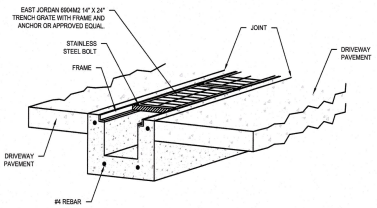
PACKET 4.376 August 9, 2022



NOTES:

1. DRIVEWAY CULVERT PIPE IS TO BE CONCRETE REINFORCED PIPE, ASTM C76 CLASS V (MIN. 3000-PSI D-LOAD RATING).
2. PIPE INVERT TO MATCH ADJACENT DITCH FLOWLINE INVERT.
3. BRIDGE AND DRIVEWAY CONCRETE PAVEMENT TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCEMENT THROUGHOUT.
4. REBAR REINFORCEMENT IN BRIDGE STRUCTURE TO BE #4 REBAR SET IN CENTER OF BRIDGE AT 1.0' O.C.E.W., WITH 1.0' OFFSET FROM EACH END OF BRIDGE STRUCTURE.
5. USE FLEXIBLE COMPACTED BASE (95% MODIFIED COMPACTION) FOR ALL BACKFILL.
6. PAVEMENT SURFACES SLOPES TO BE PER DESIGN GRADES PROVIDED FOR SPECIFICED DRIVEWAYS.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: PAK	EFFECTIVE DATE: SOLOMON LANE PAVING BOND PROJECT	SCALE: NTS
	CHECKED: JCF	DRIVEWAY PIPE CULVERT CROSSING	DETAIL: D10
	APPROVED: JEO		

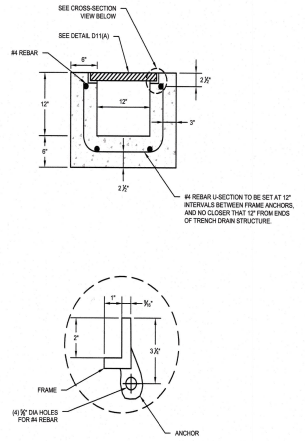


ISOMETRIC VIEW

NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. USE REBAR REINFORCEMENT AS INDICATED IN THIS DETAIL. REBAR REINFORCEMENT IS TO END 6" FROM ENDS OF TRENCH DRAIN STRUCTURE.
3. ALL JOINTS BETWEEN TRENCH DRAIN STRUCTURE AND ADJACENT PAVEMENT ARE TO BE EXPANSION JOINTS.
4. ALL JOINTS ARE TO BE SEALED WITH TXDOT DMS-6310 SL-2 OR APPROVED EQUAL JOINT SEALANT.
5. TRENCH DRAIN SURFACE TO BE SET FLUSH WITH ADJACENT PAVEMENT SURFACES.
6. SET GRATE AND FRAME WITH ANCHOR PER MANUFACTURER'S DIRECTION WITH ANCHORS SET AT 12" INTERVALS AND MINIMUM 6" SEPARATION FROM ENDS OF TRENCH DRAIN STRUCTURE.
7. STAINLESS STEEL BOLTS ARE TO BE SET FLUSH WITH GRATE SURFACE.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO THE CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: PAK	CHECKED: JCF	APPROVED: JEO
	EFFECTIVE DATE: SOLOMON LANE BOND	SCALE: NTS	DETAIL:
	DRIVEWAY TRENCH DRAIN		D11(A)



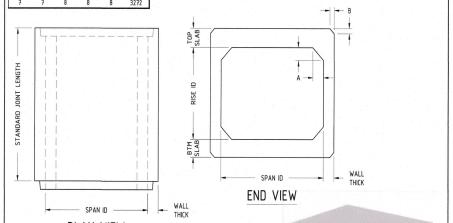
FRAME AND ANCHOR CROSS-SECTION VIEW

MIDLAND Engineering Services	DRAWN: PAK	CHECKED: JCF	APPROVED: JEO
	EFFECTIVE DATE: SOLOMON LANE BOND	SCALE: NTS	DETAIL:
	DRIVEWAY TRENCH DRAIN		D11(B)

SPAN ID ft.	RISE ID ft.	TOP SLAB in.	BTM SLAB in.	WALL THICK in.	WEIGHT lbs. / ft.
3	2	7	6	4	848
3	3	7	6	4	952
4	2	7.5	6	5	1146
4	3	7.5	6	5	1276
4	4	7.5	6	5	1405
5	2	8	7	6	1541
5	3	8	7	6	1696
5	4	8	7	6	1851
5	5	8	7	6	2006
6	2	9	7	7	1821
6	3	9	7	7	2002
6	4	8	7	7	2183
6	5	8	7	7	2344
6	6	8	7	7	2545
7	2	8	8	8	2238
7	3	8	8	8	2446
7	4	8	8	8	2652
7	5	8	8	8	2859
7	6	8	8	8	3066
7	7	8	8	8	3272

SPAN ID ft.	RISE ID ft.	TOP SLAB in.	BTM SLAB in.	WALL THICK in.	WEIGHT lbs. / ft.
8	3	8	8	8	2652
8	4	8	8	8	2859
8	5	8	8	8	3066
8	6	8	8	8	3272
8	7	8	8	8	3479
8	8	8	8	8	3686
9	4	9	9	9	3511
9	5	9	9	9	3744
9	6	9	9	9	3976
9	7	9	9	9	4209
9	8	9	9	9	4441
9	9	9	9	9	4674
10	4	10	10	10	4228
10	5	10	10	10	4486
10	6	10	10	10	4745
10	7	10	10	10	5003
10	8	10	10	10	5261
10	9	10	10	10	5520
10	10	10	10	10	5778

SPAN ID ft.	RISE ID ft.	TOP SLAB in.	BTM SLAB in.	WALL THICK in.	WEIGHT lbs. / ft.
11	4	11	11	11	5418
11	5	11	11	11	5294
11	6	11	11	11	5578
11	7	11	11	11	5862
11	8	11	11	11	6146
11	9	11	11	11	6430
11	10	11	11	11	6715
11	11	11	11	11	6999
12	4	12	12	12	5856
12	5	12	12	12	6166
12	6	12	12	12	6476
12	7	12	12	12	6786
12	8	12	12	12	7096
12	9	12	12	12	7406
12	10	12	12	12	7716
12	11	12	12	12	8026
12	12	12	12	12	8336





NOTE:

-CUSTOM DESIGNED TO MEET SPECIFIC PROJECT DESIGN SPECIFICATIONS SUCH AS: ASTM C1433, ASTM C877, AASHTO M273, AASHTO M259 OR STATE DOT.
-A = WALL THICKNESS
-B = 2" FOR 4'-6" THICK WALLS, 4" FOR 7'-12" THICK WALLS

FORTERRA	REGION, STATE: NORTH TX	DATE: 2018	SECT.PAGE: 1.2.1
	REINFORCED CONCRETE BOX CULVERT TONGUE & GROOVE		

Uses
Precast box sections are recommended for installations where circular concrete pipe cannot provide adequate flow capacity, and as a superior substitute for cast-in-place box culverts, long span metal arches, short bridges and multi-barrel circular culverts or drains.

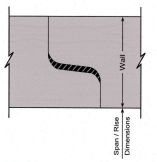
Sizes
Precast box sections are normally available in spans of 4 feet through 12 feet, with a variety of rises.

Applications
Precast box sections can be used for the following:
- highway culverts
- railroad culverts
- short span highway bridges
- storm drains
- livestock, pedestrian or golf cart undercrossing
- utility tunnels
- underground stormwater retention structures
- groundwater recharge systems
- to replace existing open channels or ditches, and enable land to be used productively
- jacked or tunneled installations.

Joints
Precast box sections are produced with tongue and groove joints for packing with mastic joint compound, pre-formed mastic or mortar.

Applicable Specifications
The following specification applies to precast concrete box sections:
- ASTM C789 / AASHTO M259 - Precast Reinforced Concrete Bob Section for Culverts, Storm Drains and Sewers.
- ASTM C850 / AASHTO M273 - Precast Reinforced Concrete Bob Section for Culverts, Storm Drains and Sewers with Less Than 2 Feet of Cover Subjected to Highway Loadings
- ASTM C1433 - Precast Reinforced Concrete Box Sections for Culverts.
- State DOT Design Standards for Storm Drains and Sewers.
- ASTM C1577 - Standard specification for precast Monolithic Box Sections for Culverts. Storm Drain, and Sewer designed according to AASHTO LRFD.

FORTERRA	REGION, STATE:	DATE: 2018	SECT.PAGE: 16.3.1
	PRECAST BOX CULVERTS		



Manufacturer Estimated Quantities

Span (Ft.)	Rise (Ft.)	Wall (In.)	Pre-Formed Size	Pre-Formed Pcs. / Jt.	Mastic Gal./Jt.
-	-	-	-	-	-
-	-	-	-	-	-
4	2	5	1 1/2" x 3'-6"	3.1	-
4	3	5	1 1/2" x 3'-6"	3.5	-
4	4	5	1 1/2" x 3'-6"	3.9	-
5	2	6	1 1/2" x 3'-6"	3.6	-
5	3	6	1 1/2" x 3'-6"	4.0	-
5	4	6	1 1/2" x 3'-6"	4.4	-
5	5	6	1 1/2" x 3'-6"	4.8	-
6	2	7	1 1/2" x 3'-6"	4.1	-
6	3	7	1 1/2" x 3'-6"	4.5	-
6	4	7	1 1/2" x 3'-6"	4.9	-
6	5	7	1 1/2" x 3'-6"	5.3	-
6	6	7	1 1/2" x 3'-6"	5.7	-
7	2	8	1 1/2" x 3'-6"	4.7	-
7	3	8	1 1/2" x 3'-6"	5.1	-
7	4	8	1 1/2" x 3'-6"	5.5	-
7	5	8	1 1/2" x 3'-6"	5.9	-
7	6	8	1 1/2" x 3'-6"	6.3	-
7	7	8	1 1/2" x 3'-6"	6.7	-
8	3	8	1 1/2" x 3'-6"	5.5	-
8	4	8	1 1/2" x 3'-6"	5.9	-
8	5	8	1 1/2" x 3'-6"	6.3	-
8	6	8	1 1/2" x 3'-6"	6.7	-
8	7	8	1 1/2" x 3'-6"	7.1	-
8	8	8	1 1/2" x 3'-6"	7.5	-

Span (Ft.)	Rise (Ft.)	Wall (In.)	Pre-Formed Size	Pre-Formed Pcs. / Jt.	Mastic Gal./Jt.
9	3	9	-	-	-
9	5	9	1 1/2" x 3'-6"	8.7	-
9	6	9	1 1/2" x 3'-6"	9.3	-
9	7	9	1 1/2" x 3'-6"	9.9	-
9	8	9	1 1/2" x 3'-6"	10.5	-
9	9	9	1 1/2" x 3'-6"	11.0	-
10	3	10	-	-	-
10	5	10	1 1/2" x 3'-6"	9.4	-
10	6	10	1 1/2" x 3'-6"	10.0	-
10	7	10	1 1/2" x 3'-6"	10.6	-
10	8	10	1 1/2" x 3'-6"	11.1	-
10	9	10	1 1/2" x 3'-6"	11.7	-
10	10	10	1 1/2" x 3'-6"	12.3	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
12	4	12	1 1/2" x 3'-6"	10.2	-
12	5	12	1 1/2" x 3'-6"	10.7	-
12	6	12	1 1/2" x 3'-6"	11.3	-
12	7	12	1 1/2" x 3'-6"	11.9	-
12	8	12	1 1/2" x 3'-6"	12.5	-
12	9	12	1 1/2" x 3'-6"	13.0	-
12	10	12	1 1/2" x 3'-6"	13.6	-
12	11	12	1 1/2" x 3'-6"	14.2	-
12	12	12	1 1/2" x 3'-6"	14.7	-

FORTERRA		DATE: 2018	SECT.PAGE: 16.3.3
	PRECAST BOX JOINT MATERIAL		

PACKET PAGE 4.377 August 9, 2022

Know what's below. Call before you dig.

Description	By	Date	Rev. No.

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT

DETAILS 4 OF 8

STATE OF TEXAS — JOSHUA C. FERGUSON — 117692 — LICENSED PROFESSIONAL ENGINEER — March 2022

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Pvng & Utilities\DWGS\3.1 DWG\Plans PVNG\D16 DET.dwg May 31, 2022 - 2:04pm jekingston

TABLE OF DIMENSIONS AND REINFORCING STEEL
(Wings for One Structure End)

Dimensions					Variable Reinforcing			Estimated Quantities per ft of Wing length (Two-Wings) (3)	
Maximum Wingwall Height H_w (4)	W	X	Y	Z	Bars J1 Size	Bars J1 Spa	Bars J2 Size	Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-5"	5'-1"	1'-0"	9"	7	#4	7	#4	1'-0"	33.73	0.248
3'-0"	2'-6"	5'-1"	1'-0"	9"	7	#4	7	#4	1'-0"	37.07	0.261
3'-6"	2'-7"	5'-1"	1'-0"	9"	7	#4	7	#4	1'-0"	37.74	0.273
4'-0"	2'-8"	5'-1"	1'-0"	9"	7	#4	7	#4	1'-0"	39.41	0.285
4'-6"	2'-9"	5'-1"	1'-6"	1'-0"	7	#4	7	#4	1'-0"	41.75	0.330
5'-0"	2'-10"	5'-1"	1'-6"	1'-0"	7	#4	7	#4	1'-0"	45.09	0.343
5'-6"	3'-0"	5'-1"	1'-6"	1'-0"	7	#4	7	#4	1'-0"	45.75	0.355
6'-0"	3'-2"	5'-1"	1'-6"	1'-0"	7	#4	7	#4	1'-0"	46.42	0.387
7'-0"	3'-5"	5'-1"	1'-9"	1'-3"	7	#4	7	#4	1'-0"	52.77	0.414
8'-0"	4'-1"	5'-2"	2'-0"	1'-6"	8"	#5	7	#4	1'-0"	60.19	0.486
9'-0"	4'-4"	5'-2"	2'-3"	1'-9"	8"	#4	6"	#4	6"	81.69	0.535
10'-0"	5'-1"	5'-2"	2'-6"	2'-0"	8"	#5	6"	#4	6"	97.25	0.584
11'-0"	5'-1"	6'-2"	2'-9"	2'-3"	8"	#6	6"	#5	6"	132.65	0.634
12'-0"	6'-1"	7'-3"	3'-0"	2'-6"	9"	#7	6"	#5	6"	162.29	0.721

TABLE OF WINGWALL REINFORCING (Two-Wings)

Bar	Size	No.	Spa
D	#5	~	1'-0"
F	#4	~	1'-0"
J	#4	~	1'-0"
G	#6	4	~
H	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

Bar	Size	No.	Spa
K	#4	~	1'-0"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

TABLE OF ESTIMATED ANCHOR TOEWALL QUANTITIES

Bar	Size	No.	Spa
K	#4	~	1'-0"
N	#5	6	~
OL	#4	6	~
Reinf (Lb/Ft)			9.82
Conc (CY/Ft)			0.074

1. Extend Bars P 3'-0" Min into bottom slab of box culvert.
2. Adjust to fit as necessary to maintain 1 1/2" clear cover and 4" Min between bars.
3. Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings multiply the tabulated values by Lw.
4. Recommended values of slope are 3:1, 4:1, and 6:1. Provide 3:1 or flatter slope.
5. When shown elsewhere on the plans, construct 5" deep concrete riprap. Payment for riprap is as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, extend construction joints or grooved joints, oriented in the direction of flow, across the full distance of the riprap, at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B is not required.
6. At Contractor's option, end the culvert toewall flush with wingwall toewall. Adjust reinforcing as needed.
7. 3" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures without railing and curbs taller than 1'-0", refer to Extended Curb Details (ECD) standard sheet.
8. For vehicle safety, reduce curbs height, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.
9. See Table of Maximum Wing Heights for various slopes. Height is limited based on a 33-6" maximum safety pipe runner length.

TABLE OF MAXIMUM WING HEIGHTS (9)

Side Slope	Hw Max
3:1	17'- 9"
4:1	8'-10"
6:1	6'- 1"

WING DIMENSION CALCULATIONS:

$H_w = H + T + C - 0.250$ (9)

$L_w = (H_w - 0.333) (SL)$

For cast-in-place culverts:

$L_{tw} = (N) (SL) + (R + J) (L)$

For precast culverts:

$L_{tw} = (N) (2L) + SL + (R - L) (0.500)$

$L_C = (L_{tw}) - (2L)$

$A_{tw} = L_C$

Total Wingwall Area (two wings = SF)

$= (H_w + 0.333) (L_W)$

H_w = Height of wingwall (feet)
SL|= Side slope ratio (horizontal : 1 vertical)
L_W = Length of wingwall (feet)
L_{tw} = Culvert toewall length (feet)
L_C = Culvert curb between wings (feet)
A_{tw} = Anchor toewall length (feet)
N = Number of culvert spans

See applicable box culvert standard for H, S, T, and B values. See Table of Maximum Wall Heights for limits on H_w.

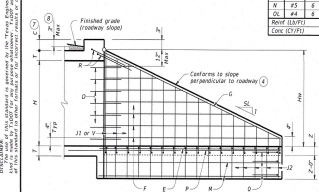
MATERIAL NOTES:

Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.
Provide Class "C" concrete (f'c = 3,600 psi).
Adjust reinforcing as necessary to provide a minimum clear cover of 1 1/2".
Provide pipe runners and anchor pipes meeting the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5L|X52.
Provide ASTM A307 bolts and nuts.
Provide ASTM A36 steel plates.
Galvanize all steel components, except reinforcing unless required elsewhere in the plans, after fabrication.
Repair galvanizing damaged during transport or construction in accordance with the Item 445, "Galvanizing".
For optional adhesive anchors, install epoxy adhesive anchorages in accordance with the manufacturer's instructions including hole size, drilling equipment and method, hole cleaning equipment and method, mixing and dispensing of adhesive, and anchor insertion. Do not alter the manufacturer's drilling and cleaning equipment. Provide anchorage rods that are clean and free of grease, oil, and other foreign matter. Demonstrate hole cleaning method to the Engineer for approval and continue the approved process for all anchorage locations. Test adhesive anchors in accordance with Item 450.3.3, "Tests." Test 3 anchors per 100 anchors installed.

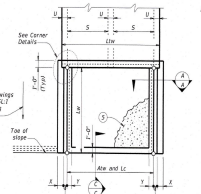
GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.
The safety end treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the pipe runners.
Pipe runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.
When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.
All bolts, nuts, washers, brackets, angles, and pipe runners are considered parts of the safety end treatment for payment.
The quantities for pipe runners, reinforcing steel, and concrete, resulting from the formulas given herein are for Contractor's information only.
See Box Culvert Supplement (BCS) standard sheet for additional dimensions and information.

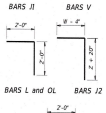
Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out or bars.



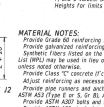
INSIDE ELEVATION OF WINGWALL
(Showing reinforcing. Culvert and culvert toewall reinforcing not shown for clarity.)



PLAN
(Showing dimensions.)



BARS J1



BARS V



BARS L and OL

BARS J2



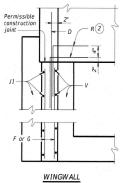
BARS R



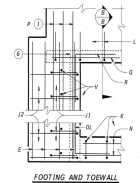
BARS D

BARS K
(Length = 5'-0")

SECTION A-A

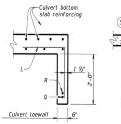


WINGWALL

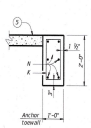


FOOTING AND TOEWALL

CORNER DETAILS
(Culvert and culvert toewall reinforcing not shown for clarity.)



SECTION B-B (5)



SECTION C-C

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH STRAIGHT WINGS

FOR 0° SKEW BOX CULVERTS
TYPE I ~ CROSS DRAINAGE

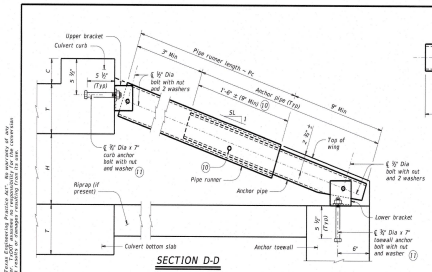
SETB-SW-O

FILE:	setbdbx-20.dgn	DN: TxDOT	CK: CAP	DW: TxDOT	CK: TxDOT
©TxDOT	February 2020	CONT: SECT:	JOB:	HIGHWAY:	
REVISIONS		DIST:	COUNTY:		SHEET NO.

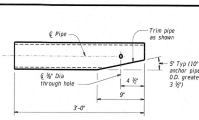
SHEET 1 OF 3

DATE:
FILE:

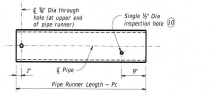
DISCLAIMER:
The use of this drawing is governed by the Texas Engineering Practice Act. No liability of any kind is assumed by the Texas Department of Transportation for any reuse or alteration of this standard or for incorrect results or damages resulting from its use.



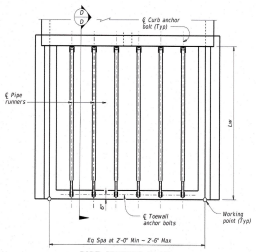
SECTION D-D
(Showing curb pipe runner.)



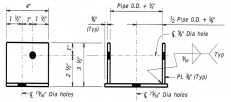
ANCHOR PIPE DETAILS



PIPE RUNNER DETAILS



PIPE RUNNER PLAN



SIDE VIEW ELEVATION

Note: Upper and lower brackets match the required pipe diameters as shown in the table.

UPPER AND LOWER BRACKET DETAILS

MAXIMUM PIPE RUNNER LENGTHS AND REQUIRED PIPE RUNNER AND ANCHOR PIPE SIZES

Maximum Pipe Runner Length (Pc)	Required Pipe Runner Size			Required Anchor Pipe Size		
	Pipe Size	Pipe O.D.	Pipe I.D.	Pipe Size	Pipe O.D.	Pipe I.D.
9'-4"	3" STD	3.500"	3.068"	2" STD	2.375"	2.067"
19'-0"	4" STD	4.500"	4.026"	3" STD	3.500"	3.068"
33'-6"	5" STD	5.563"	5.047"	4" STD	4.500"	4.026"

(15) After installation of pipe runner, use the 1/2" inspection hole to ensure that the lap of the anchor pipe with the pipe runner is adequate.

(16) At Contractor's option, an adhesive anchor may be used. Provide 1" Dia adhesive anchors that meet the requirements of ASTM A307, Gr A fully threaded rods. Embed threaded rods into curb, wingwalls, and toewall using a Type III, Class C, D, E, or F anchor adhesive. Minimum embedment depth is 3 1/2". Provide anchor adhesive able to achieve a basic bond strength in tension, N_{ba}, of 20 kips. Submit signed and sealed calculations or the manufacturer's published literature showing the proposed anchor adhesive's ability to develop this load to the Engineer for approval prior to use.

PIPE RUNNER DIMENSION CALCULATIONS:

$P_c = (L_W) (K) - (1.688)$

P_c = Pipe runner length (Feet)

K = Constant values for use in formulas

Slope SL:1	K
3:1 ~ 1.054	
4:1 ~ 1.031	
6:1 ~ 1.014	

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH STRAIGHT WINGS

FOR 0° SKEW BOX CULVERTS
TYPE I ~ CROSS DRAINAGE

SETB-SW-O

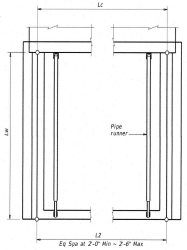
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©TxDOT	February 2020	CONT: SECT:	JOB:	HIGHWAY:	
REVISIONS		DIST:	COUNTY:		SHEET NO.

SHEET 2 OF 3

DISCLAIMER:
The use of this drawing is governed by the Texas Engineering Practice Act. No liability of any kind is assumed by the Texas Department of Transportation for any reuse or alteration of this standard or for incorrect results or damages resulting from its use.

Culvert Station and/or Creek name followed by applicable end (LT, Rt or Both) (12)	Lc (Ft)	L2			Pipe Runner (Pc)				3'-0" Anchor Pipe	
		No. Spa	Spa at (Ft)	Overall Length (Ft)	No.	Length (Ft)	Size (2", 3" or 3")	Total Length (Ft) (12)	Size (2", 3" or 4")	Total (12) Length (Ft)

(12) Quantities shown are for one structure end if 'LT' or 'Rt'. Quantities shown are for two structure ends if 'Both'.



PIPE RUNNER LAYOUT

SPECIAL NOTE:
This tabular sheet is to be filled out by the culvert specifier and provides information for the construction details and quantities of pipe runners.

An Excel 2010 spreadsheet to assist in completing this table can be downloaded from the Bridge Standards (English) web page on the TxDOT web site. The completed sheet must be signed, sealed, and dated by a licensed Professional Engineer.

Note that the tabular quantities are given for estimating purposes only. It is likely that these quantities will change due to field conditions. Therefore, all dimensions must be verified by the Contractor in the field prior to fabrication of the safety end treatment components.

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH STRAIGHT WINGS

FOR 0° SKEW BOX CULVERTS
TYPE I ~ CROSS DRAINAGE

SETB-SW-O

FILE:	setbdbx-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS		DIST:	COUNTY:		SHEET NO.

SHEET 3 OF 3

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No.	Description	By	Date

DRAWN/DESIGNED: PAK
CHECKED: JCF
APPROVED: JCF
VERT. SCALE:
HORIZ. SCALE:
PROJECT NO.: BPU19-05
DATE: MAY 2022

MIDLAND Engineering Services

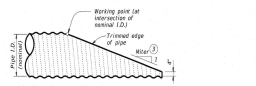
SOLOMON LANE PAVING BOND PROJECT

DETAILS 6 OF 8

STATE OF TEXAS — MAY 31 2022 — JOSHUA C. FERGUSON — 117692 — LICENSED PROFESSIONAL ENGINEER

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OF 64

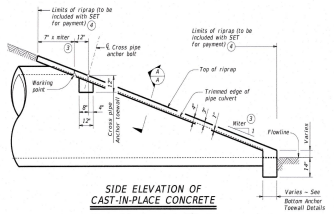
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NOTE: All pipe runners, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

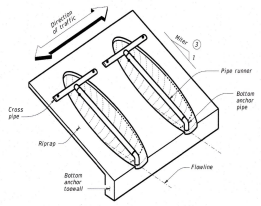
SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

(Showing corrugated metal pipe (CMP) culvert. Details of reinforced concrete pipe (RCP) culvert are similar.)



SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing reinforced concrete pipe (RCP) culvert. Details of corrugated metal pipe (CMP) culvert are similar. Pipe runners not shown for clarity)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

(Showing installation with no skew.)

CROSS PIPE LENGTHS AND PIPE RUNNER LENGTHS (1) (2)

Nominal Culvert I.D.	Pipe Culvert Slope – S	Cross Pipe Length	Pipe Runner Length											
			3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
			0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
24"	1' - 7"	3' - 5"	N/A	N/A	N/A	5' - 10"	N/A	N/A	N/A	8' - 1"	N/A	N/A	N/A	12' - 9"
27"	1' - 8"	3' - 8"	N/A	N/A	5' - 5"	6' - 11"	N/A	N/A	7' - 7"	9' - 7"	N/A	N/A	11' - 11"	14' - 11"
30"	1' - 10"	3' - 11"	N/A	N/A	6' - 4"	8' - 0"	N/A	N/A	8' - 9"	11' - 0"	N/A	N/A	13' - 8"	17' - 0"
33"	1' - 11"	4' - 2"	6' - 2"	6' - 5"	7' - 3"	9' - 1"	8' - 6"	8' - 10"	10' - 0"	12' - 5"	13' - 3"	13' - 9"	15' - 5"	19' - 2"
36"	2' - 1"	4' - 5"	6' - 13"	7' - 3"	8' - 2"	10' - 2"	9' - 6"	9' - 11"	11' - 2"	13' - 10"	14' - 9"	15' - 3"	17' - 2"	21' - 3"
42"	2' - 4"	4' - 11"	8' - 6"	8' - 10"	9' - 11"	12' - 4"	11' - 7"	12' - 0"	13' - 6"	16' - 8"	17' - 9"	18' - 5"	20' - 8"	25' - 7"
48"	2' - 7"	5' - 5"	10' - 1"	10' - 5"	11' - 9"	N/A	13' - 7"	14' - 2"	15' - 10"	N/A	20' - 9"	21' - 6"	24' - 2"	N/A
54"	3' - 0"	5' - 11"	11' - 8"	12' - 1"	N/A	N/A	15' - 8"	16' - 3"	N/A	N/A	22' - 10"	24' - 8"	N/A	N/A
60"	3' - 3"	6' - 5"	13' - 3"	N/A	N/A	N/A	17' - 9"	N/A	N/A	N/A	26' - 10"	N/A	N/A	N/A

TYPICAL PIPE CULVERT MITERS (3)

Side Slope	0° Skew	15° Skew	30° Skew	45° Skew
3:1	3:1	3.106:1	3.464:1	4.243:1
4:1	4:1	4.141:1	4.619:1	5.657:1
6:1	6:1	6.212:1	6.928:1	8.485:1

CONDITIONS WHERE PIPE RUNNERS ARE NOT REQUIRED (2)

Nominal Culvert I.D.	Single Pipe Culvert	Multiple Pipe Culverts
12" thru 21"	Skews thru 45°	Skews thru 45°
24"	Skews thru 45°	Skews thru 30°
27"	Skews thru 30°	Skews thru 15°
30"	Skews thru 15°	Skews thru 15°
33"	Skews thru 15°	Always required
36"	Normal (no skew)	Always required
42" thru 60"	Always required	Always required

STANDARD PIPE SIZES AND MAX PIPE RUNNER LENGTHS (2)

Pipe Size	Pipe O.D.	Pipe I.D.	Max Pipe Runner Length
2" STD	2.375"	2.067"	N/A
3" STD	3.500"	3.068"	10' - 0"
4" STD	4.500"	4.026"	19' - 8"
5" STD	5.563"	5.047"	24' - 2"

ESTIMATED CONCRETE RIPRAP QUANTITIES (CY) (5)

Nominal Culvert I.D.	3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
12"	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.8
15"	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9
18"	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	1.0
21"	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	1.2
24"	0.6	0.7	0.7	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.1	1.3
27"	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.1	1.1	1.1	1.2	1.4
30"	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.2	1.2	1.2	1.3	1.6
33"	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.3	1.3	1.4	1.5	1.7
36"	0.9	0.9	0.9	1.1	1.1	1.1	1.2	1.4	1.4	1.5	1.6	1.8
42"	1.0	1.0	1.1	1.3	1.2	1.3	1.3	1.6	1.6	1.7	1.8	2.1
48"	1.1	1.1	1.2	N/A	1.4	1.4	1.5	N/A	1.9	1.9	2.1	N/A
54"	1.3	1.3	N/A	N/A	1.6	1.6	N/A	N/A	2.1	2.1	N/A	N/A
60"	1.4	N/A	N/A	N/A	1.7	N/A	N/A	N/A	2.3	N/A	N/A	N/A

(1) Provide pipe runner of the size shown in the tables. Provide cross pipe of the same size as the pipe runner. Provide cross pipe stub out and bottom anchor pipe of the next smaller size pipe as shown in the Standard Pipe Sizes and Max Pipe Runner Lengths table.

(2) This standard allows for the placement of only one pipe runner across each culvert pipe opening. In order to limit the clear opening to be traversed by an errant vehicle, the following conditions must be met:

For 60° culvert pipes, the skew must not exceed 0°.
For 54° culvert pipes, the skew must not exceed 15°.
For 48° culvert pipes, the skew must not exceed 30°.
For all culvert pipe sizes 42" and less, the skew must not exceed 45°.

If the above conditions cannot be met, the designer should consider using a safety end treatment with flared wings. For further information, refer to the TxDOT Roadway Design Manual.

(3) Miter = slope of mitered end of pipe culvert.

(4) Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap".

(5) Quantities shown are for one end of one reinforced concrete pipe (RCP) culvert. For multiple pipe culverts or for corrugated metal pipe (CMP) culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.

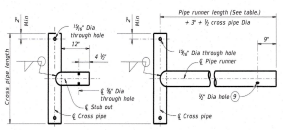
Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT

FOR 12" DIA TO 60" DIA PIPE CULVERTS
TYPE II – CROSS DRAINAGE

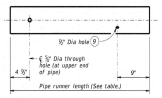
SETP-CD

SHEET 1 OF 2



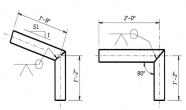
OPTION A1 OPTION A2

CROSS PIPE AND CONNECTIONS DETAILS



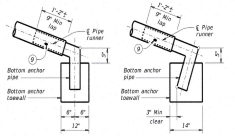
NOTE: The separate pipe runner shown is required when Cross Pipe Connection Option A1 is used.

PIPE RUNNER DETAILS



OPTION B1 OPTION B2

BOTTOM ANCHOR PIPE DETAILS (10)



OPTION B1 OPTION B2

BOTTOM ANCHOR TOEWALL DETAILS

(Culvert and riprap not shown for clarity.)

(4) Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap".

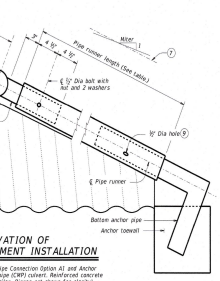
(6) Recommended values of side slope are 3:1, 4:1, and 6:1. All quantities, calculations, and dimensions shown herein are based on these recommended values. Slope of 3:1 or flatter is required for vehicle safety.

(7) Note that actual slope of pipe runner may vary slightly from side slope of riprap and trimmed culvert pipe edge.

(8) Ensure that riprap concrete does not flow into the cross pipe so as to permit disassembly of the bolted connection to allow cleanout access.

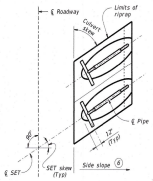
(9) After installation, inspect the ½" hole to ensure that the lap of the pipe runner with the bottom anchor pipe is adequate.

(10) At fabricator's option, a heat bend to a smooth 5° radius or a manufactured elbow (of the same material as the runner) may be substituted for the mitered and welded joint in the bottom anchor pipe.

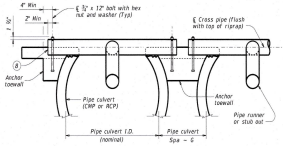


SIDE ELEVATION OF SAFETY END TREATMENT INSTALLATION

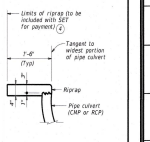
(Showing pipe runner with Cross Pipe Connection Option A1 and Anchor Pipe Option B2 on corrugated metal pipe (CMP) culvert. Reinforced concrete pipe culvert (RCP) details are similar. Riprap not shown for clarity)



PLAN OF SKEWED INSTALLATION



SHOWING CROSS PIPE AND ANCHOR TOEWALL



SHOWING TYPICAL PIPE CULVERT AND RIPRAP

SECTION A-A

MATERIAL NOTES:
Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.
Provide pipe runners, cross pipes, and anchor pipes conforming to the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5L/5L2.
Provide ASTM A307 bolts and nuts.
Galvanize all steel components, except concrete reinforcing, after fabrication.
Repair galvanizing damaged during transport or construction in accordance with the specifications.

GENERAL NOTES:
Pipe runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.
Safety end treatments (SETs) shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the pipe runners.
Payment for riprap and toewall is included in the price bid for each safety end treatment.
Construct concrete riprap and all necessary inverts in accordance with the requirements of Item 432, "Riprap".

SHEET 2 OF 2

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT

FOR 12" DIA TO 60" DIA PIPE CULVERTS
TYPE II – CROSS DRAINAGE

SETP-CD

Know what's below. Call before you dig.

							Description
							By
							Date
							Rev. No.
DRAWN/DESIGNED: PAK	CHECKED: JCF	APPROVED: JCF	VERT. SCALE:	HORIZ. SCALE:	PROJECT NO.: BPU19-05	DATE: MAY 2022	

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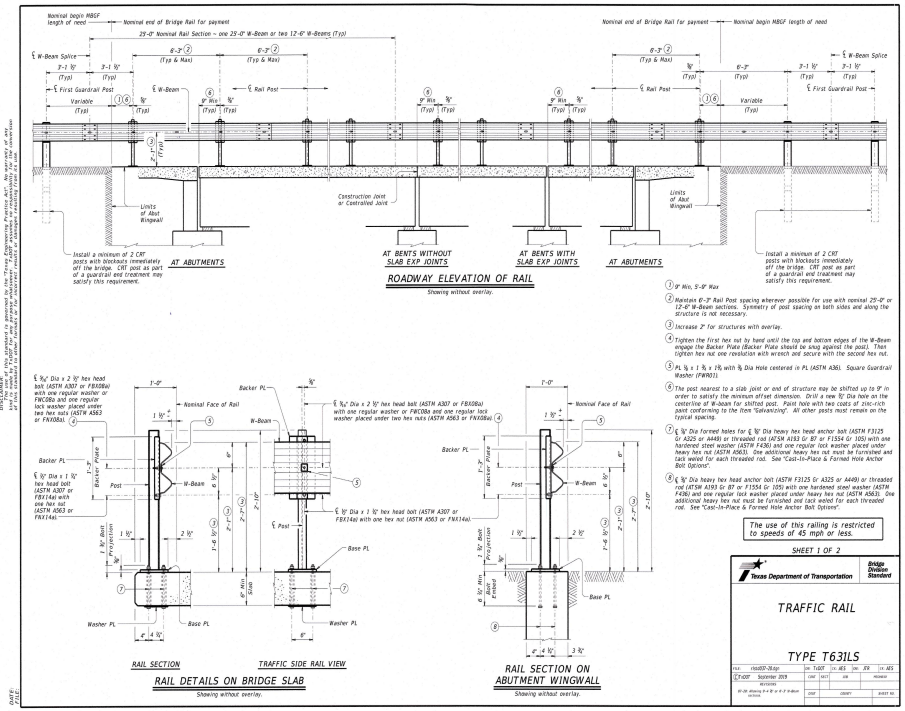
SOLOMON LANE PAVING BOND PROJECT

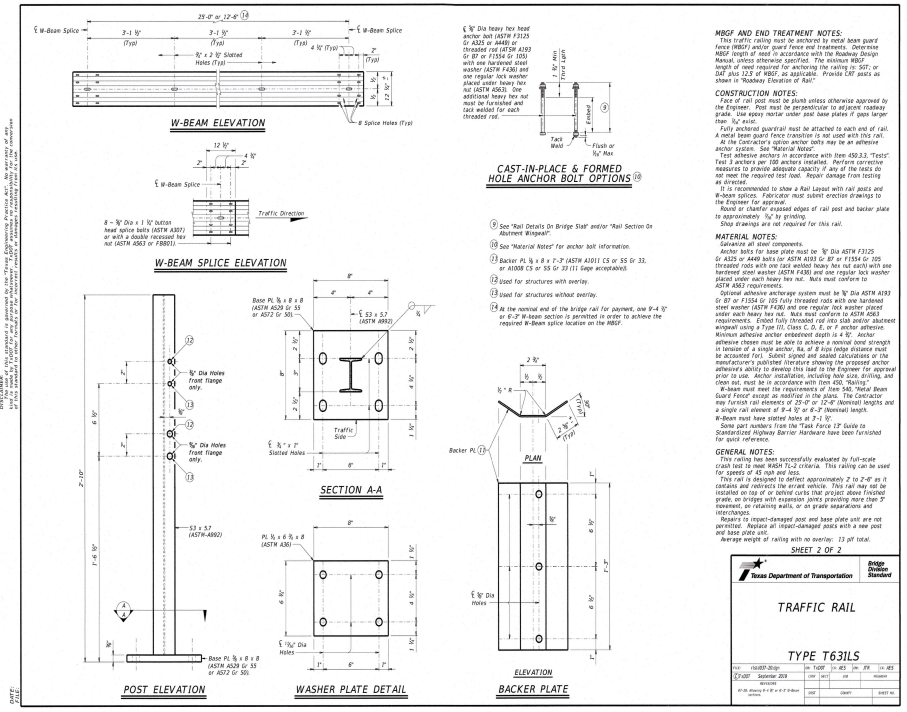
DETAILS 7 OF 8

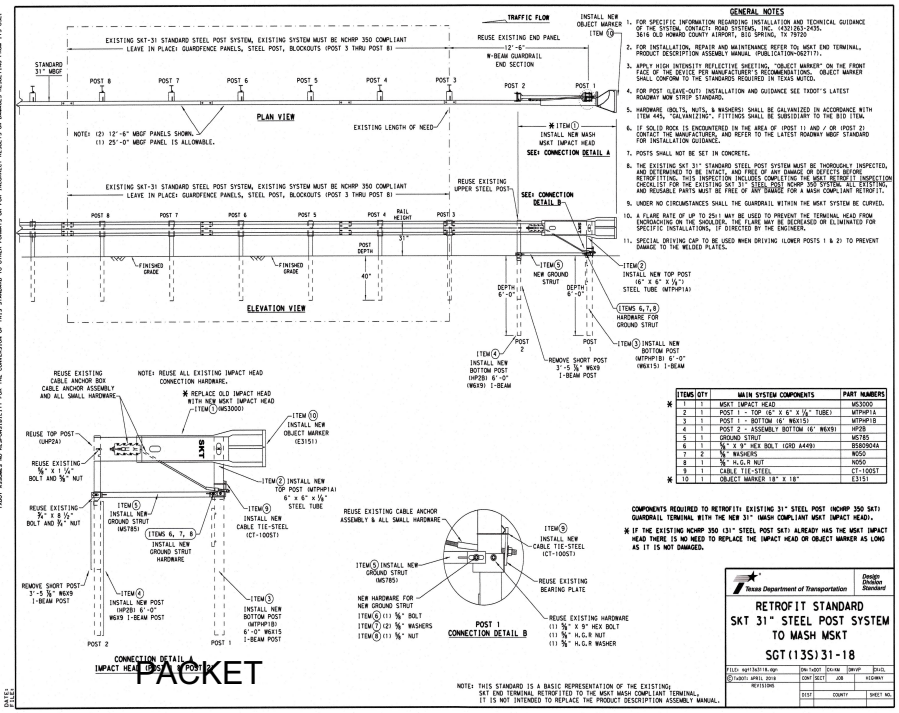
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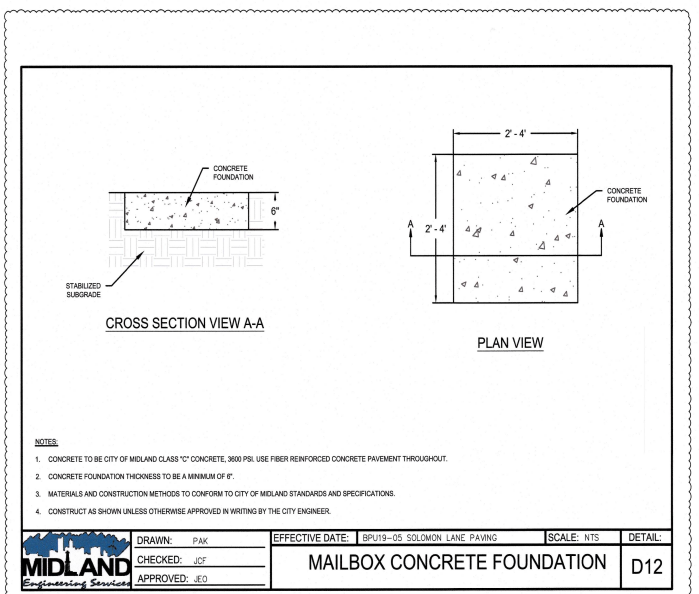
63 OF 64

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APPROVED:	JCF
VERT. SCALE:	
HORIZ. SCALE:	
PROJECT NO.:	BPU19-05
DATE:	MAY 2022

Rev. No.	Date	By	Description
01	6/17/22	PAK	ADD MAILBOX DETAIL

MIDLAND Engineering Services

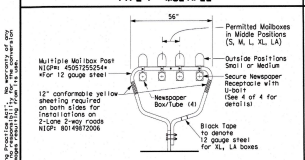
SOLOMON LANE PAVING
BOND PROJECT
DETAILS
8 OF 8

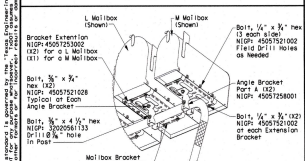
STATE OF TEXAS
JOSHUA C. FERGUSON
117692
LICENSED PROFESSIONAL ENGINEER
JUNE 17, 2022

64
OF 64

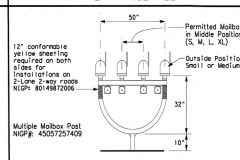
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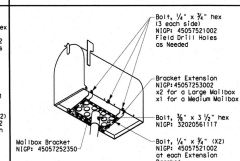
TYPE 1 - MULTIPLE





TYPE 4 - MULTIPLE





MAILBOX SIZES

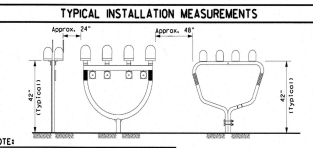
MAILBOX SIZE	TYPICAL DIMENSIONS LENGTH	WIDTH	HEIGHT	MAX ** WEIGHT
SMALL	19 ½"	6"	7"	6 LBS
MEDIUM	22 ½" *	8" *	11 ½" *	8 LBS
LARGE	23 ½"	11 ½"	13 ½"	11 LBS
EXTRA LARGE	18"	14"	12"	13 LBS
LOCKABLE	18"	11 ½"	15"	23 LBS

* See Note 1.
** Excluding Molded Plastic on 4 X 4 Post

GENERAL NOTES:

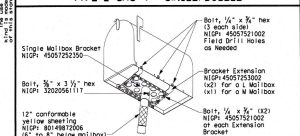
1. Dimensions shown (length, width, and height) are typical, not maximums. However, anytime a medium size mailbox is mounted on a single/double mount or on the outside position on a multi mount, the dimensions shown are maximums.
2. Mailboxes shall be made of light weight sheet metal or light weight plastic. Heavy steel, cast iron or decorative mailboxes shall not be used on the state highway system.

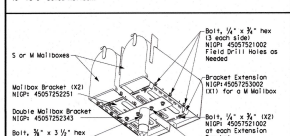
TYPICAL INSTALLATION MEASUREMENTS



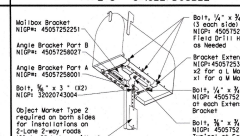
NOTE:
Mailbox Installations in sidewalk areas shall be in accordance with the latest TxDOT Design Standard sheets PED-Pedestrian Facilities Curb Ramps.

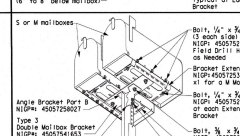
TYPE 2 and 4 - SINGLE/DOUBLE



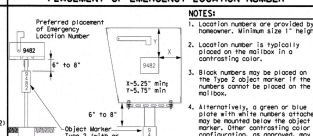


TYPE 3 - SINGLE/DOUBLE





PLACEMENT OF EMERGENCY LOCATION NUMBER

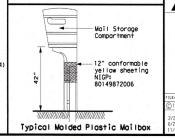


NOTES:

1. Location numbers are provided by homeowner. Minimum size 1" height.
2. Location number is typically placed on the mailbox in a contrasting color.
3. Block numbers may be placed on the Type 2 object marker if the numbers cannot be placed on the mailbox.
4. Alternatively, a green or blue plate with white numbers attached may be mounted below the object marker. Other contrasting color configuration, as approved, may be used.
5. See 3 of 4 for Foundation details.
6. See 4 of 4 for Hardware details.

SHEET 1 OF 4

TYPE 5



Texas Department of Transportation — Maintenance Division Standard

MAILBOX MOUNTING AND ASSEMBLY

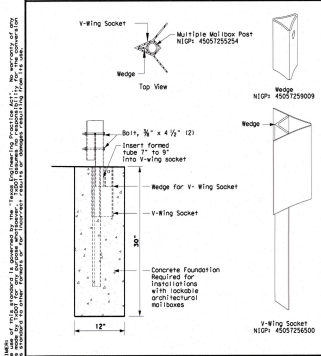
MB(1)-21

DATE:
FILE: MB-21.dgn

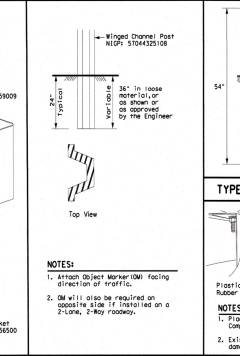
DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT March 2004	CONT	SECT	JOB
REVISIONS			HIGHWAY
2/2005 11/2009 4/2015			
8/2008 1/2013	DIST	COUNTY	SHEET NO.
11/2006 1/2014			

TYPE 1 - SUPPORT/FOUNDATION

Thin Wall Tube w/ V-LOC Anchorage



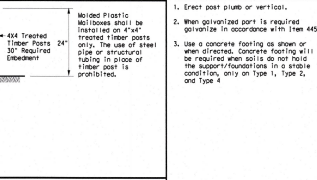
TYPE 3 - SUPPORT/FOUNDATION



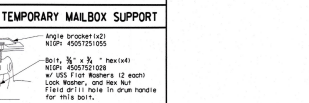
NOTES:

1. Attach Object Marker(OM) facing direction of traffic.
2. OM will also be required on opposite side if installed on a 2-Lane, 2-Way roadway.

TYPE 5 - SUPPORT/FOUNDATION



TYPE 6 - TEMPORARY MAILBOX SUPPORT



NOTES:

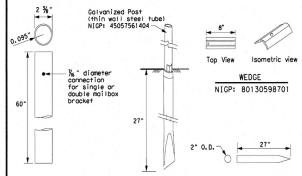
1. Place on approved plastic drum as shown in the Compliant Work Zone Traffic Control Devices (CWZTCD).
2. Existing attachment hardware shall be used unless damaged. Damaged hardware shall be replaced.

GENERAL NOTES:

1. Erect post plumb or vertical.
2. When galvanized part is required galvanize in accordance with Item 445.
3. Use a concrete footing as shown or when directed. Concrete footing will be required when soils do not hold the support/foundations in a stable condition, only on Type 1, Type 2, and Type 4

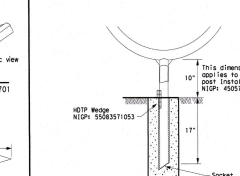
TYPE 2 - SUPPORT/FOUNDATION

Thin Wall Steel Tube w/Wedge Anchor System



TYPE 4 - SUPPORT/FOUNDATION

Whitecoated steel post NIGP: 45057561107
Multiple post NIGP: 45057257409
Recycled Rubber post (RR) NIGP: 45057561057



SHEET 3 OF 4

Texas Department of Transportation — Maintenance Division Standard

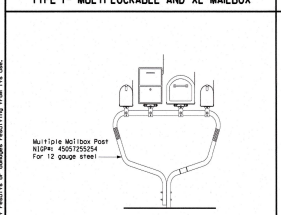
MAILBOX SUPPORT AND FOUNDATION

MB(3)-21

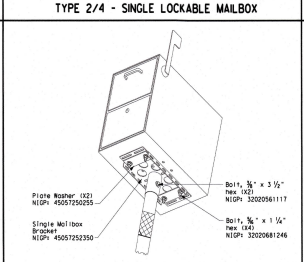
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FILE: MB-21.dgn

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©TxDOT March 2004	CONT	SECT	JOB
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8/2008 1/2013	DIST	COUNTY	SHEET NO.
11/2006 1/2014			

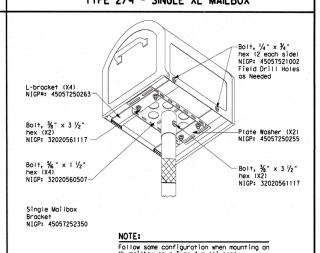
TYPE 1- MULTI LOCKABLE AND XL MAILBOX



TYPE 2/4 - SINGLE LOCKABLE MAILBOX

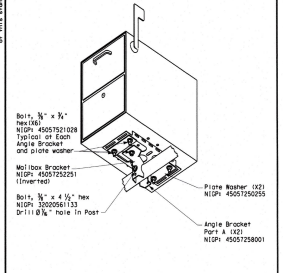


TYPE 2/4 - SINGLE XL MAILBOX

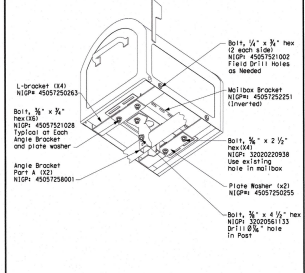


NOTE:
Follow same configuration when mounting an XL mailbox on a Type 4 multi post.

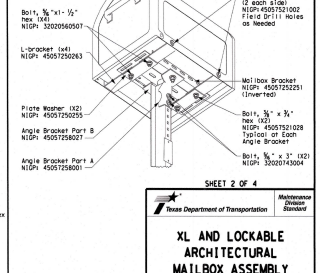
TYPE 1 MULTI - LOCKABLE ARCHITECTURAL (LA)



TYPE 1 MULTI - XL MAILBOX



TYPE 3 - XL MAILBOX MOUNTING



SHEET 2 OF 4

Texas Department of Transportation — Maintenance Division Standard

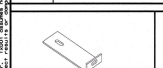
XL AND LOCKABLE ARCHITECTURAL MAILBOX ASSEMBLY

MB(2)-21

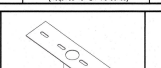
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FILE: MB-21.dgn

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©TxDOT March 2004	CONT	SECT	JOB
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2/2005 11/2009 4/2015			
8/2008 1/2013	DIST	COUNTY	SHEET NO.
11/2006 1/2014			

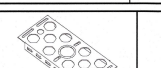
TYPE	TYPE 1	TYPE 2	TYPE 3	TYPE 4			TYPE 5	TYPE 6
Configuration	Multiple	Single or Double	Single or Double	Single	Double	Multiple	Single	Single
Mailbox Size NIGP #	Outside Positions S or M Inside Positions S, M, L, XL, or LA	Single: S, M, L, XL, or LA Double: SS, SM, MM	Single: S, M, L, or XL Double: SS, SM, MM	S, M, L, XL, or LA	SS, SM, or MM	Outside Position: S or M Inside Position: S, M, L, or XL	Molded Plastic	S, or M
Mailbox Post NIGP #	45057255254 (Galvanized Multiple)	45057561404 (Thin Walled Galvanize)	57044325108 (Wing Channel Post)	45057561107 (Thin walled white powder coated) 45057561057 (Recycled Rubber Post: S or M only)	45057561107 (Thin Walled White Powder Coated)	45057257409 (White Powder Coated Multiple)	4x4 Timber	Construction Barrel
Post and Mailbox Hardware NIGP #	45057259009 (Wedge) 45057256500 (V-Wing Socket) 45057253002 (Bracket Extension) 45057252251 (Mailbox Bracket) 45057258001 (Part A Angle Bracket x2) 45057258027 (Part B Angle Bracket x2) 45057252255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket for XL x4)	80130598701 (Wedge) 80130238407 (Wedge Anchor) 45057253002 (Bracket Extension) 45057252343 (Double MB Bracket) 45057252350 (S. Mailbox Bracket) 45057255251 (Mailbox Bracket) 45057252255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket for XL x4)	45057541653 (Type 3 Double Mailbox Bracket) 45057252251 (Mailbox Bracket) 45057253002 (Bracket Extension) 45057258001 (Part A Angle Bracket) 45057258027 (Part B Angle Bracket) 45057252255 (Plate Washer for XL x2) 45057250263 (L-Bracket for XL x4)	55083571053 (Wedge) 55083571004 (Socket) 45057252350 (Single Mailbox Bracket) 45057253002 (Bracket Extension) 45057252343 (Double Mount Bracket) 45057252251 (Mailbox Bracket x2)	55083571053 (Wedge) 55083571004 (Socket) 45057253002 (Bracket Extension) 45057252343 (Double Mount Bracket) 45057252251 (Mailbox Bracket x2)	55083571053 (Wedge) 55083571004 (Socket) 45057253002 (Bracket Extension) 45057252350 (Single Mount Bracket) 45057252255 (Plate Washer for XL x2) 45057250263 (L-Bracket for XL x4)	None	45057251055 Angle Bracket (x2)
Foundation Used	Class B Concrete (Required for LA Mailboxes)	Class B Concrete (Required for LA Mailboxes)	None	Class B Concrete (not used with recycled rubber post, required for LA Mailboxes)	Class B Concrete (not required)	Class B Concrete	None	None



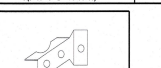
NIGP: 45057250263
L-Bracket x4 for XL sized mailboxes



NIGP: 45057252343
Double Mailbox Bracket For Type 2 and Type 4 double mount



NIGP: 45057252350
Single Mailbox Bracket For Type 2 single and for Type 4 single and multi mount



NIGP: 45057258001
Part "A" Angle Bracket For Type 1 multi (2 per mailbox) and Type 3 single and double



NIGP: 45057251055
Type 6 Angle Bracket (2 per mailbox)



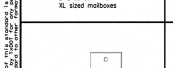
NIGP: 45057252251
Mailbox Bracket For Type 1 multi and any double mount (use 2)



NIGP: 45057253002
Bracket Extension Use 1 for a medium Mailbox Use 2 for a Large Mailbox



NIGP: 45057258027
Part "B" Angle Bracket For Type 3 single and double



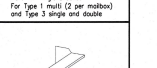
NIGP: 80130598701
Wedge for Type 2



NIGP: 45057250255
Plate Washer for Architecural and XL Mailboxes



NIGP: 45057541653
Type 3 double mailbox bracket



NIGP: 55083571053
Type 4 Mailbox Wedge



NIGP: 55083571004
Type 4 Mailbox Socket



NIGP: 80130238407
Type 2 Wedge Anchor



NIGP: 45057259009
Wedge for Type 1 V-wing Socket



NIGP: 45057256500
V-wing Socket for Type 1 Foundation

NIGP #	OBJECT MARKERS AND CONFORMABLE SHEETING
55083511759	Type 2 OM 4"x4" (3 Needed) for Type 3 Wing Channel Post
55083512906	Type 2 OM 6"x12" (1 needed) for Type 3 Wing Channel Post
80149872006	12" Conformable Reflective Yellow Sheeting for Flexible Posts

NOTES:

1. Type 2 object marker in accordance with Traffic Engineering Standard Delineators & Object Markers.
2. A light weight receptacle for newspaper delivery can be attached to the mailbox, provided it does not touch the mailbox, present a hazard to traffic or delivery of the mail, extend beyond the front of the mailbox, or display advertising, except the publication title.

BID CODES FOR CONTRACTS

MB-(X) ASSM TY (XXX) (X)

Type of Mailbox
S = Single
D = Double
M = Multiple
MP = Molded Plastic

Type of Post
MC = Winged Channel Post
RR = Recycled Rubber
TWW = Thin Walled White Tubing
TWG = Thin Walled Galvalized Tubing
TIM = Timber

Type of Foundation
Ty 1 = V-Loc
Ty 2 = Wedge Anchor Steel System
Ty 3 = Winged Channel post
Ty 4 = Wedge Anchor Plastic System
Ty 5 = 4 X 4 Post

SHEET 4 OF 4

Texas Department of Transportation — Maintenance Division Standard

NIGP PARTS LIST AND COMPATIBILITY

MB(4)-21

DATE:
FILE: MB-21.dgn

DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT March 2004	CONT	SECT	JOB
REVISIONS			HIGHWAY
2/2005 11/2009 4/2015			
8/2008 1/2013	DIST	COUNTY	SHEET NO.
11/2006 1/2014			

DRAWN/DESIGNED: PAK					
CHECKED: JCF					
APPROVED: JCF					
VERT. SCALE:					
HORIZ. SCALE:					
PROJECT NO.: BPU19-05					
DATE: MAY 2022	Rev. No.	Date	By	Description	

MIDLAND Engineering Services

SOLOMON LANE PAVING BOND PROJECT

DETAILS 9 OF 8

STATE OF TEXAS — JOSHUA C. FERGUSON — 117692 — LICENSED PROFESSIONAL ENGINEER

64A

OF 64

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the Texas Department of Transportation for any purpose whatsoever. Texas Department of Transportation assumes no responsibility for the accuracy or suitability of this standard for use for any other than Texas Department of Transportation projects. Any modifications required to meet the needs of the user are the sole responsibility of the user.

File: P:\Engineering Services\Engineering Projects\2019\BPU19-05 Solomon Pvng & Utils\3 DWG\BPU19-05 DET - Copy.dwg Jun 17, 2022 - 11:33am pilkington

City Council Meeting

Item Number: 5

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF A REPLACEMENT ENGINE FOR A CATERPILLAR 836H COMPACTOR FROM WARREN POWER & MACHINERY, INC., DBA WARREN CAT THROUGH BUYBOARD FOR A TOTAL COST OF $140,626.35 (DISTRICT: NONE) (GENERAL SERVICES)

Purpose:

Resolution authorizing the replacement of the engine for Unit 7922 a Caterpillar 836H Compactor at the Landfill as a sole source from Warren Power & Machinery, Inc. dba Warren Cat for a cost of $140,626.35.

Recommended City Council Action:

Approve

Fiscal Impact:

Funding is available in the amount of $140,626.35 from the Garage Operating Fund.

Discussion:

City Unit 7922 which was purchased in November of 2012 for $899,980.83 is a Caterpillar 836H compactor located at the Landfill. In April of 2019 the engine and transmission were replaced with rebuilt components for $262,548.29. The rebuilt engine and transmission had a one (1) year/two thousand (2,000) hour major component standard warranty. Only July 8, 2022, it was determined that this compactor suffered a catastrophic engine failure. The cost to replace the engine is $140,626.35 and will also have a one (1) year/two thousand (2,000) hour major component standard warranty. The cost of a new compactor is $1,200,000.00. Since this piece of equipment is very critical to the operations of the Landfill, staff recommends replacing the engine in Unit 7922. Warren Power & Machinery, Inc. dba Warren Cat is the authorized

Caterpillar Dealership in the west Texas area and according to Texas Local Government Code 252.022 (a)(7)(D), competitive bidding requirements do not apply to the purchase of captive replacement parts or components for equipment if those parts or components are available from only one source. Please see the attached memo from Manuel Salinas, Garage Superintendent, for additional information.

Therefore, please consider a resolution approving an engine replacement for Unit 7922, a Caterpillar 836H compactor, on a sole source basis from Warren Power & Machinery, Inc. dba Warren Cat of Odessa, Texas for a cost of $140,626.35.

Tina Daugherty
City Manager's Office

Fleet Services Division

INTEROFFICE MEMORANDUM

TO: Regina Stephenson

FROM: Eloy Salinas

SUBJECT: Engine replacement on a Caterpillar 836H Compactor

DATE: 07/19/22

Fleet services is requesting the replacement of the engine on a 2012 Caterpillar 836H Compactor unit # 7922 worksite location is at the landfill. This unit has a total of 17,993 hours due to wear and tear of its daily use. This unit has thrown a piston rod through the side of the engine causing extended non repairable damage to the engine block. This unit is a vital piece of equipment that is used daily to compact the trash daily that comes to our landfill. Due to the age and hours of this compactor there is no warranty. Therefore, Fleet Services is requesting the engine to be replaced for the total amount of $140,626.35 by Warren Caterpillar of Odessa. Warren Caterpillar is the Sole Source authorized Caterpillar dealership for West Texas.

Sincerely,

Manuel Eloy Salinas

City of Midland Garage Superintendent

INTEROFFICE MEMORANDUM

TO: **Erika Munoz Martinez, Purchasing Manager**

FROM: **Jeffery Ahrlett, Director of Solid Waste**

SUBJECT: **Caterpillar 836H Compactor Engine Replacement**

DATE: **July 26, 2022**

Solid Waste is seeking city council approval of a replacement engine for the Landfill 836H Compactor, in the amount of $140,626.35.

The 836H Compactor is a critical piece of equipment for the Landfill operations. This is one of our larger compactors and is much more efficient on the working face. With the number of customers and waste the Landfill accepts daily it is necessary for us to operate this piece of equipment. At this time, it is recommended we replace the engine as a new 836H Compactor would cost approximately 1.2 million.

Solid Waste is seeking the approval in the amount of $140,626.35 for the purchase of a replacement engine for the 836H Compactor.

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE SOLE-SOURCE PURCHASE OF A REPLACEMENT ENGINE FOR A CATERPILLAR 836H COMPACTOR FROM WARREN POWER & MACHINERY, INC., DBA WARREN CAT THROUGH BUYBOARD FOR A TOTAL COST OF $140,626.35

WHEREAS, Buyboard is a cooperative purchasing agency with which the City participates with on purchases through a cooperative purchasing program in accordance with TEX. LOC. GOV'T CODE § 271.102; and

WHEREAS, Warren Power & Machinery, Inc., dba Warren Cat, the sole-source provider of a replacement engine for a Caterpillar 836H Compactor, submitted a total cost to the City of $140,626.35 for the purchase and replacement of said engine through Buyboard as shown on the quote attached hereto as Exhibit A, which is incorporated herein for all purposes; and

WHEREAS, said replacement engine is only available from Warren Power & Machinery, Inc., dba Warren Cat through Buyboard; and

WHEREAS, the City Council finds the price proposed for said replacement engine to be fair and reasonable; and

WHEREAS, the City Council finds it to be in the public interest to authorize the purchase of said replacement engine from Warren Power & Machinery, Inc., dba Warren Cat through Buyboard;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Manager is hereby authorized and directed to purchase a replacement engine for a Caterpillar 836H Compactor from Warren Power & Machinery, Inc., dba Warren Cat through Buyboard for a total cost of $140,626.35.

SECTION TWO. That the City Comptroller is hereby authorized and directed to pay Warren Power & Machinery, Inc., dba Warren Cat $140,626.35 for the replacement of

said engine from funds available in the Garage Operating Fund upon receipt of proper invoices or statements approved by the City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Regina Stephenson, General Services Director

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

Quote No: 22123306 - 1

CITY OF MIDLAND
FLEET SERVICES DIVISION PO BOX 1152
MIDLAND

ESTIMATE

CUSTOMER NO.	QUOTE NO.	DATE	CONTACT
9984010	22123306	7/14/2022	MARTIN NAVARRETE
PHONE NO.	**FAX NO.**	**EMAIL**	
432 685 3431		mnavarrete@mmidlandtexas.gov	
MODEL	**MAKE**		**SERIAL NO.**
836H	CATERPILLAR		0BXD01211
UNIT NO.	**HOURS**	**WO NO.**	**P.O. NO.**
7922	17993		

Note

REPLACE ENGINE
ADDITIONAL PARTS, LABOR, & TRAVEL MAY BE REQUIRED
PARTS FREIGHT IS NOT INCLUDED

SEGMENT: 00 CLEAN & INSPECT ENGINE (571 1000)
NOTES:

Parts

Part Number	Description	Qty	Unit Price	Ext Price
			Total Estimated Parts:	0.00

Labor

Item Number	Description	Qty	Unit Price	Ext Price
PRF-**-**-**	PERMIAN FLD SJB	6.00	178.00	1,068.00
			Total Estimated Labor:	1,068.00

Labor Summary

Misc

Item Number	Description	Qty	Unit Price	Ext Price
SUP-**-**-**	SUPPLIES	1	22.00	22.00
			Total Estimated Misc:	22.00

Segment 00 Total: 1,090.00

SEGMENT: 01 REMOVE & INSTALL ENGINE (010 1000)
NOTES:

Parts

Part Number	Description	Qty	Unit Price	Ext Price
0679425	HOSE	1	18.60	18.60
1063969	ELEMENT AS	1	140.74	140.74
1063973	ELEMENT AS	1	97.90	97.90
1180271	HOSE	1	150.75	150.75
1R0762	FILTER A-FUE	1	33.51	33.51

Exhibit A

1R1808	FILTER AS-LU	1	40.81	40.81
2087448	CLAMP-T BOLT	8	10.53	84.24
2190313	CLAMP-T'BOLT	4	10.56	42.24
2388649	CAT ELC	6	83.22	499.32
2732999	HOSE	1	19.87	19.87
4571527	FILTER-FUEL	1	44.09	44.09
5P0597	CLAMP	4	6.47	25.88
5P0597	CLAMP	6	6.47	38.82
5P1471	CM-HOSE STK	45	1.44	64.80
5P1471	CM-HOSE STK	50	1.44	72.00
6Y2090	MOUNT AS	2	391.76	783.52
7E8630	HOSE	4	97.18	388.72
7X2564	BOLT	4	15.30	61.20
8S6824	CLAMP A	1	64.73	64.73
8T4123	WASHER	18	2.24	40.32
8T6381	BOLT	2	13.01	26.02
9W6582	SLEEVE	2	21.72	43.44
9W6584	WASHER	2	43.94	87.88
9W9930	MOUNT ASSY	2	62.85	125.70
9X4008	HOSE	2	88.07	176.14
5153957X	15W40 BULK OIL	16	17.19	275.04
RI-PARTS-4	MISC PARTS	1	200.00	200.00
			Total Estimated Parts:	3,646.28

Labor

Item Number	Description	Qty	Unit Price	Ext Price
PRF-**-**-**	PERMIAN FLD SJB	53.20	178.00	9,469.60
			Total Flat Rate Labor:	9,469.60

Labor Summary

Segment 01 Total: 13,115.88

SEGMENT: 02 REPLACE WITH NEW ENGINE (511 1000)
NOTES:
ENGINE HAS A HOLE IN THE SIDE OF THE BLOCK IT
NEEDS TO BE INSPECTED FOR THE CORE DEPOSIT

Parts

Part Number	Description	Qty	Unit Price	Ext Price
10R9095	ALTERNATOR G	1	622.13	622.13
10R9095	CORE DEPOSIT (CORE)	1	788.72	788.72
10R9815	MOTOR G ELECON	1	652.36	652.36
10R9815	CORE DEPOSIT (CORE)	1	827.03	827.03
1906560	BELT	1	43.06	43.06
2178938	TIGHTENING-B	1	230.84	230.84
2256108	ENG AR COMPL	1	72,394.87	72,394.87
2256108	CORE DEPOSIT (CORE)	1	5,490.20	5,490.20
RI-PARTS-4	MISC PARTS	1	200.00	200.00
			Total Estimated Parts:	81,249.21

Labor

Item Number	Description	Qty	Unit Price	Ext Price
PRF-**-**-**	PERMIAN FLD SJB	10.00	178.00	1,780.00

			Total Flat Rate Labor:	1,780.00

Labor Summary

Segment 02 Total:	83,029.21

SEGMENT: 03 REMOVE & INSTALL RADIATOR (010 1353)
NOTES:

Parts

Part Number	Description	Qty	Unit Price	Ext Price
2094573	CLAMP-T BOLT	4	10.38	41.52
2094580	CLAMP-T BOLT	4	10.45	41.80
2126933	CLAMP-T BOLT	2	10.14	20.28
2388648	CAT ELC 50/50 1GL	29	17.70	513.30
2446626	HOSE	2	18.33	36.66
3718122	CM HOSE BULK	23	1.60	36.80
3718949	CM HOSE BULK	36	2.10	75.60
RI-PARTS-3	MISC PARTS	1	150.00	150.00
			Total Estimated Parts:	915.96

Labor

Item Number	Description	Qty	Unit Price	Ext Price
PRF-**-**-**	PERMIAN FLD SJB	10.65	178.00	1,895.70
			Total Flat Rate Labor:	1,895.70

Labor Summary

Segment 03 Total:	2,811.66

SEGMENT: 04 RECONDITION RADIATOR (020 1353)
NOTES:

Parts

Part Number	Description	Qty	Unit Price	Ext Price
1064572	HOSE	9	6.92	62.28
1129486	RETAINER	10	167.95	1,679.50
1P4278	CLAMP	20	2.88	57.60
3527837	HOSE AS	1	29.64	29.64
3527838	HOSE AS	1	32.77	32.77
3874364	CORE AS RTDR	10	1,305.71	13,057.10
3J7354	SEAL O RING	1	1.68	1.68
4J5477	SEAL O RING	1	1.77	1.77
5P5755	M-SEAL STK	2	25.98	51.96
6I2431	SEAL	10	62.79	627.90
6I2435	SPACER	10	18.82	188.20
6V8647	CONNECTOR	1	5.73	5.73
			Total Estimated Parts:	15,796.13

Labor

Item Number	Description	Qty	Unit Price	Ext Price
PRF-**-**-**	PERMIAN FLD SJB	10.65	178.00	1,895.70
			Total Flat Rate Labor:	1,895.70

Labor Summary

Segment 04 Total: 17,691.83

SEGMENT: 05 REMOVE & INSTALL AFTERCOOLER (010 1063)
NOTES:

Parts

Part Number	Description	Qty	Unit Price	Ext Price
RI-PARTS-2	MISC PARTS	1	100.00	100.00
			Total Estimated Parts:	100.00

Labor

Item Number	Description	Qty	Unit Price	Ext Price
PRF-**-**-**	PERMIAN FLD SJB	2.00	178.00	356.00
			Total Flat Rate Labor:	356.00

Labor Summary

Segment 05 Total: 456.00

SEGMENT: 06 RECONDITION AFTERCOOLER (020 1063)
NOTES:
INCLUDES CLEAN, INSPECT, AND TEST
ADDITIONAL PARTS MAY BE REQUIRED IF THE COOLER
DOES NOT PASS INSPECTION

Parts

Part Number	Description	Qty	Unit Price	Ext Price
1013125	GASKET	1	8.05	8.05
2087448	CLAMP-T BOLT	8	10.53	84.24
7E8630	HOSE	4	97.18	388.72
7T8331	MOUNTING	4	40.25	161.00
RI-PARTS-1	MISC PARTS	1	50.00	50.00
			Total Estimated Parts:	692.01

Labor

Item Number	Description	Qty	Unit Price	Ext Price
PRF-**-**-**	PERMIAN FLD SJB	2.70	178.00	480.60
			Total Flat Rate Labor:	480.60

Labor Summary

Misc

Item Number	Description	Qty	Unit Price	Ext Price
GEX-**-**-**	CLEAN, INSEPCT, TEST AFTERCOOLER	1	600.00	600.00
			Total Time and Material Misc:	600.00

Segment 06 Total: 1,772.61

SEGMENT: 07 REPLACE COMPONENT(S) (510 7003)
NOTES:
ENGINE CAUGHT ON FIRE
ADDITIONAL PARTS AND LABOR MAY BE REQUIRED AFTER
THE ENGINE IS REMOVED AND THE AREA IS INSPECTED

Parts

Part Number	Description	Qty	Unit Price	Ext Price

1180271	HOSE	1	150.75	150.75
1220450	GROMMET	2	12.65	25.30
1268472	CM SEAL	40	0.34	13.60
1317810	SHIELD AS.-R	1	1,044.74	1,044.74
1317811	SHIELD AS.-L	1	1,060.40	1,060.40
1497738	CLIP	2	10.85	21.70
1749169	CM BULK TUBE	51	0.14	7.14
1W8620	VALVE A	1	213.53	213.53
2270091	BAFFLE	1	220.81	220.81
2301434	FITTING-CONT	1	29.21	29.21
2391134	VALVE AS-ETH	1	185.73	185.73
2456051	SEAL	1	13.64	13.64
2456052	SEAL	1	13.49	13.49
2456053	SEAL	1	15.61	15.61
2475556	ATOMIZER AS	1	45.12	45.12
2600859	HARNESS AS	1	86.43	86.43
2H9524	GROMMET	2	8.75	17.50
2T3019	CLIP	1	5.67	5.67
3553148	SWITCH AS	1	84.02	84.02
387-7999	HARNESS AS	1	1,634.11	1,634.11
3S2093	TIE	5	0.45	2.25
4D7388	CLIP	1	8.95	8.95
4D8123	CLIP	1	7.65	7.65
4H1225	WASHER	15	1.64	24.60
4P7581	CLIP	2	5.61	11.22
4P7582	CLIP	2	10.97	21.94
4P8134	CLIP	1	5.61	5.61
4S1962	CLIP	4	9.26	37.04
4S4455	CLIP	2	8.89	17.78
5P0597	CLAMP	6	6.47	38.82
5P1471	CM-HOSE STK	90	1.44	129.60
5P7483	M-SEAL STK	2	22.35	44.70
5P7483	M-SEAL STK	2	22.35	44.70
5P9085	CLIP	1	5.18	5.18
6D4244	CLIP	2	7.87	15.74
7N2059	CLAMP A	1	35.97	35.97
7T8331	MOUNTING	10	40.25	402.50
7X0590	WASHER	12	5.70	68.40
8T4121	WASHER	2	1.08	2.16
8T4137	BOLT	2	1.03	2.06
8T4195	BOLT	18	1.51	27.18
8T4223	WASHER	2	1.62	3.24
8T4226	WASHER	18	3.65	65.70
8T4244	NUT	10	1.06	10.60
8T4648	BOLT	10	3.43	34.30
9U2277	CLIP A	1	20.59	20.59
9X6772	STRAP	18	1.89	34.02
RI-PARTS-4	MISC PARTS	20	200.00	4,000.00
			Total Estimated Parts:	10,011.00

Labor

Item Number	Description	Qty	Unit Price	Ext Price
PRF-**-**-**	PERMIAN FLD SJB	24.00	178.00	4,272.00
			Total Estimated Labor:	4,272.00

Labor Summary

Segment 07 Total: 14,283.00

SEGMENT: 08 EVACUATE & RECHARGE AIR CONDITIONER (597 7320)
NOTES:
ADDITIONAL PARTS AND LABOR MAY BE REQUIRED

Parts

Part Number	Description	Qty	Unit Price	Ext Price
257-3226	DRYER	1	62.18	62.18
9X7380	SEAL O RING	1	2.82	2.82
9X7381	SEAL O RING	3	2.72	8.16
9X7385	SEAL	2	4.24	8.48
126T	FREON-R134 12OZ TP	8	13.44	107.52
RI-PARTS-2	MISC PARTS	1	100.00	100.00
			Total Estimated Parts:	289.16

Labor

Item Number	Description	Qty	Unit Price	Ext Price
PRF-**-**-**	PERMIAN FLD SJB	4.00	178.00	712.00
			Total Estimated Labor:	712.00

Labor Summary

Misc

Item Number	Description	Qty	Unit Price	Ext Price
ACR-**-**-**	AIR COND RECYCLE	1	75.00	75.00
			Total Estimated Misc:	75.00

Segment 08 Total: 1,076.16

SEGMENT: 88 TRAVEL TO/FROM MACHINE (056 7000)
NOTES:
10 ROUND TRIPS ARE INCLUDED
ADDITIONAL TRAVEL MAY BE REQUIRED
INCLUDES TRANSPORTING THE ENGINE TO AND FROM
WARREN CAT TO CITY OF MIDLAND LANDFILL

Parts

Part Number	Description	Qty	Unit Price	Ext Price
			Total Estimated Parts:	0.00

Labor

Item Number	Description	Qty	Unit Price	Ext Price
TVR-**-**-**	TRAVEL LABOR 10 ROUND TRIPS	20.00	115.00	2,300.00
			Total Estimated Labor:	2,300.00

Labor Summary

Misc

Item Number	Description	Qty	Unit Price	Ext Price
TVL-**-**-**	VEHICLE MILEAGE	650	3.60	2,340.00

MF5-**-**-**	FUEL SURCHARGE	1	110.00	110.00
FR2-**-**-**	FREIGHT TO TRANSPORT ENGINE TO AND FROM THE ODESSA SHOP	2	275.00	550.00
			Total Estimated Misc:	3,000.00

Segment 88 Total:	5,300.00
Total Segments:	140,626.35
SUB TOTAL (BEFORE TAXES)	140,626.35

PO#: _____ Authorized Name: _____ (signature)

Date: _____ _____ (print)

Thank you for this opportunity to serve your company

CONTACT INFORMATION:

Prepared by: Ramon Sotelo Phone: 432-444-2990 Email: Ramon.Sotelo@warrencat.com Fax:

-This estimate will expire 14 days from the estimate date.
-Price excludes Freight Charges, Operating Supplies/EPA Fees, Overtime and supplier prices changes and surcharges
-Terms: Net 10th Prox.
-Sales Taxes where applicable are not included with the above prices.

Terms and Conditions

BY SIGNATURE ABOVE, I certify that I am the owner or owner's agent, and authorize Warren CAT, its employees, subcontractors or consultants to perform the inspection, maintenance or repairs described above to include the provision and use of necessary materials required to accomplish the described work scope. I further authorize Warren CAT to operate the equipment, or any part therein described for the purpose of testing and/or inspection. I understand that payment for all work performed is due in full upon completion.

Upon acceptance, this quote becomes a legal agreement between you (either an individual or the entity you are authorized to represent) and Warren CAT. Further, signing certifies the information provided is true and correct, and that the signer is authorized to charge this purchase as noted. Warren CAT reserves the right to reject a partial or modified quote. You may cancel an accepted quote until the work is started. Once started, work may be stopped at anytime. Partially completed work will be billed based on Time and Materials at Warren CAT's prevailing rate. Additional handling and storage fees may apply to work partially completed or work temporarily put on hold.

EQUIPMENT HAVING INSTALLED FIRE SUPPRESSANT SYSTEMS: During course of repair work it may become necessary to deactivate or disturb mechanical and/or electrical components of the fire suppression system. Reactivation of the fire suppressant system is the responsibility of the customer and should be undertaken before machine operations. Warren CAT accepts no responsibility for the reactivation, testing or operation of the fire suppressant system.

STANDARD WARRANTY: Parts for this repair are warranted as indicated by the manufacturer from the date of invoice. In addition, Warren CAT's standard labor warranty of 90 days will apply. Full warranty statements, including limitations and exclusions, are available from any Warren CAT facility. Ask your service representative about additional or enhanced warranty availability.

THESE WARRANTIES ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS OF PURPOSE. REMEDIES FOR THESE WARRANTIES ARE LIMITED TO THE PROVISION OF MATERIAL AND SERVICES AS SPECIFIED HEREIN. IN NO EVENT WILL EITHER CATRPILLAR OR WARREN CAT BE RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

CORE CHARGES: Core charges will be returned to customer upon acceptance of the core by Caterpillar.

OVERTIME: Overtime can be added at customers request charged at Warren CAT's prevailing overtime rate.

PARTS POLICY: This quote does not include any un-salvageable parts. Parts will be set aside for customer approval before replacement.

TURNAROUND TIME: Warren CAT will not be responsible for circumstances outside of its control. If delays are experienced, the customer will be contacted. In no event will Warren CAT or subsidiaries be liable for any direct or indirect damages (including, without limitation, lost profits, lost savings or other incidental or consequential damages) arising out of the use or inability to use the machine, even if Warren CAT or subsidiaries has been advised of the possibility of such loss.

Warren CAT

2301 Production Ln.
Odessa, TX 79761
432.332.1681 tel

Single Source Procurement

07/21/2022
To Whom It May Concern,

Warren CAT (Warren Equipment Company) is the heavy machinery and equipment expert in Oklahoma, West Texas and the Texas Panhandle. At Warren CAT, we take great pride in our ability to provide a wide range of machine services to our client base throughout Texas and Oklahoma. Our team of highly trained and uniquely skilled technicians combines extensive knowledge with state-of-the-art equipment and technology that can prolong the life of your machines and improve your productivity. We always have a full range of spare parts, engine parts, and hydraulic parts on hand to ensure timely maintenance and repairs.
As an authorized Caterpillar Dealership, we are a local single source, total solutions supplier for CAT parts and services that lives up to the highest of Caterpillar standards for durability, dependability and technology. Warren CAT offers only genuine CAT parts, as part of the Caterpillar Dealer Network, allowing us to offer a single source for support at the local level.

Regards,

Ramon Sotelo

Product Support Sales Representative
Warren CAT 2301 Production St.
Odessa, TX 79761
Main (432) 332-1681
Office (432) 331-0037
Mobile (432) 444-2990
ramon.sotelo@warrencat.com

City Council Meeting

Item Number: 6

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: **Motion authorizing the City Manager or the City Manager's designee to advertise a request for sealed bids for the Water System Improvements at Business 20 and San Andres Water Main Extension Project for the Utilities Department and to negotiate a contract for said services; provided, however, that said agreement shall not become effective until approved by the City Council. (DISTRICT 2) (GENERAL SERVICES)**

Purpose:

Motion authorizing the City Manager or the City Manager's designee to advertise a request for sealed bids for the Water System Improvements at Business 20 and San Andres Water Main Extension Project for the Utilities Department and to negotiate a contract for said services; provided, however, that said agreement shall not become effective until approved by the City Council.

Recommended City Council Action:

Approve

Fiscal Impact:

No funding at this time.

Discussion:

Please consider approval of a motion approving plans and specifications and authorizing advertisement for a request for sealed bids for the Water System Improvements at Business 20 and San Andres Water Main Extension Project for the Utilities Department. Please see the attached memo from Carl Craigo, Utilities Director, for more information.

INTEROFFICE MEMORANDUM

TO: Regina Stephenson, General Services Director

FROM: Carl Craigo, PE, Utilities Director

SUBJECT: Consider a motion to bid out the plans and specs for the construction of BI 20 water main extension

DATE: July 26, 2022

This motion is to bid the construction project for the extension of the water main from San Andres Rd to BI 20 just east of Cheyenne Rd. This project will provide a second water main feed to the area of town to the east of Midland draw. The new line will allow the area to be provided water during maintenance of the existing water main. This project was designed by Parkhill an approved on-call engineering company (Resolution 2016-006).

This will be paid for with Utilities Admin FY22 Operating Fund.

Parkhill

PROJECT MANUAL

CITY OF MIDLAND, TEXAS

Water System Improvements

Business 20 and San Andres Water Main Extension

July | 2022

Parkhill Project # 01285419

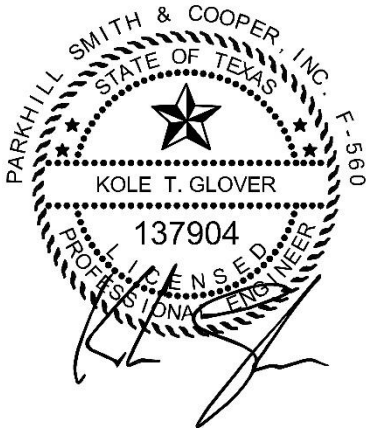
Parkhill

PROJECT MANUAL

CITY OF MIDLAND, TEXAS

Water System Improvements

Business 20 and San Andres Water Main Extension



07/19/2022

July | 2022

Parkhill Project # 01285419

PACKET 6.5 August 9, 2022

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SECTION 00 11 13 - ADVERTISEMENT

Sealed proposals addressed to the City of Midland will be received at 300 North Loraine, Midland, Texas 79701 until August 31 at 2:00 p.m. for Water System Improvements, Business 20 and San Andres Water Main Extension.

Immediately following the closing time for receipt of bids, proposals will be publicly opened and read aloud at 300 North Loraine, Midland, Texas 79701. Any bid received after closing time will be returned unopened. Bids will be tabulated and presented to the City of Midland for action at a later date.

Information for bidders, proposal forms, specifications and plans are on file at the City of Midland and the office of Parkhill, Consulting Engineers, 1700 West Wall, Suite 100, Midland, Texas 79701, 432.697.1447.

Copies of the plans, specifications and contract documents may be secured at the Parkhill office located at 1700 West Wall, Suite 100, Midland, Texas 79701, 432.697.1447, as follows:

1. Download documents (PDF file extension format) from the Parkhill Info Exchange web site after registering as a plan holder with issuing Parkhill office. **No cost or deposit required for this option.**
2. One set of paper copies for a non-refundable deposit of $50.00.
3. A digital copy (PDF file extension format) upon a non-refundable deposit of $20.00 per each CD.

Deposit shall be company or cashiers' check made payable to Parkhill. No partial sets issued.

SECTION 00 21 13 - INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have meanings indicated in General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have meanings indicated here:

A. Issuing Office: Where Bidding Documents are to be issued.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the format stated in Section 00 11 13, "Advertisement."

2.02 Use complete sets of Bidding Documents in preparing Bids. Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from use of incomplete sets of Bidding Documents.

2.03 In making copies of Bidding Documents available on aforementioned terms, Owner and Engineer do so only to obtain Bids for Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder qualifications to perform Work, Bidder shall submit with bid (a) written evidence establishing qualifications such as financial data, previous experience, and present commitments; and (b) the following additional information:

A. Subcontractor and supplier qualification information. Coordinate with provisions of Article 12 - Subcontractors, Suppliers, and Others.

B. Other required information regarding qualifications.

3.02 Bidder failure to submit required qualification information may disqualify Bidder from receiving Award of Contract.

3.03 No requirement in Article 3 to submit information will prejudice Owner's right to seek additional, pertinent information regarding Bidder qualifications.

3.04 Bidder is advised to carefully review those portions of Bid Form requiring Bidder representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT SITE

4.01 Site and Other Areas

A. Site, identified in Bidding Documents, may include rights-of-way, easements, and other lands furnished by Owner for Contractor use. Contractor shall obtain and pay for any additional lands required for temporary construction facilities, construction equipment, or storing materials and equipment, and any access needed for such additional lands.

4.02 Existing Site Conditions

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. Supplementary Conditions identify:

a. Reports known to Owner of explorations and tests of subsurface conditions at or adjacent to Site.

b. Drawings known to Owner of physical conditions relating to existing surface or subsurface structures at Site (except underground facilities).

c. Reports and Drawings known to Owner relating to Hazardous Environmental Conditions identified at or adjacent to Site; and

d. Technical Data contained in such Reports and Drawings.

2. Owner will make copies of referenced Reports and Drawings available to any Bidder on request. These Reports and Drawings are not part of Contract Documents, but Technical Data contained therein, upon whose accuracy Bidder is entitled to rely, as provided in General Conditions, are identified and established in Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or other data, interpretations, opinions, or information contained in such Reports or shown or indicated in such Drawings.

3. If Supplementary Conditions do not identify Technical Data, default definition of Technical Data set forth in Article 1 of General Conditions apply.

B. Underground Facilities: Information and data shown or indicated in Bidding Documents with respect to existing Underground Facilities at or contiguous to Site, are set forth in Contract Documents and based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

C. Adequacy of Data: Provisions concerning responsibilities for adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Articles 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for data adequacy furnished to prospective Bidders with respect to a Site Hazardous Environmental Condition, if any, and possible changes in Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at Site not shown or indicated in Drawings or Specifications or identified in Contract Documents to be within the scope of Work, appear in Article 5.06 of General Conditions.

4.03 Site Visit and Testing by Bidders

A. Bidder shall conduct required Site visit during normal working hours and not disturb any ongoing operations at Site.

B. Bidder is not required to conduct any subsurface testing or exhaustive investigations of Site conditions.

C. On request and to extent Owner has control over Site, and schedule permitting, Owner will provide Bidder access to Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner authority regarding Site.

D. Bidder shall comply with all applicable laws and regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner, property owners, or other entities controlling Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

E. Bidder shall fill all holes, clean up, and restore Site to former condition upon completion of such explorations, investigations, tests, and studies.

4.04 Owner's Safety Program

A. Site visits and work may be governed by an Owner safety program. As General Conditions indicate, if an Owner safety program exists, it will be noted in Supplementary Conditions.

4.05 Other Work at Site

A. Reference is made to Article 8 of the Supplementary Conditions for identifying the general nature of other work Owner is aware of (if any) to perform at Site by Owner or others (such as utilities and other prime contractors) and relates to Work contemplated by Bidding Documents. If Owner is party to a written Contract for such other work, then on request, Owner will provide each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER PRESENTATIONS

5.01 Before submitting a Bid, each Bidder has the responsibility to:

A. Examine and carefully study Bidding Documents and any data and reference items identified in Bidding Documents;

B. Visit Site, conduct a thorough, alert visual examination of Site and adjacent areas, and become familiar with and satisfy himself as to general, local, and Site conditions affecting cost, progress, and Work performance;

C. Become familiar with and satisfy himself as to all laws and regulations affecting cost, progress, and Work performance;

D. Carefully study all: (1) exploration reports and subsurface condition tests at or adjacent to Site, and all physical condition drawings relating to existing surface or subsurface structures at Site identified in Supplementary Conditions, especially with respect to Technical Data in such reports and drawings; and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to Site identified in Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;

E. Consider information known to Bidder himself; information commonly known to contractors

doing business in Site locality; information and observations obtained from visits to Site; Bidding Documents; and Site-related reports and drawings identified in Bidding Documents, with respect to effect of such information, observations, and documents on (1) cost, progress, and Work performance; (2) means, methods, techniques, sequences, and construction procedures to be employed by Bidder; and (3) Bidder's safety precautions and programs;

F. Agree, based on information and observations previously referred to, at time of submitting Bid, no further examinations, investigations, explorations, tests, studies, or data are necessary for determination of Bid for Work performance at price bid, within times required, and per other terms and conditions of Bidding Documents;

G. Become aware of the general nature of work to perform by Owner and others at Site that relates to Work as indicated in Bidding Documents;

H. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies Bidder discovers in Bidding Documents and confirm written resolution, thereof, by Engineer, is acceptable to Bidder;

I. Determine Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing Work; and

J. Agree the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder complied with every requirement of this Article, and without exception, Bid and all prices in Bid are premised upon performing and furnishing Work required by Bidding Documents.

ARTICLE 6 – PREBID CONFERENCE

6.01 Prebid conference, if any, will be held at time and location stated in Section 00 11 13, "Advertisement." Owner and Engineer representatives will be present to discuss Project. Engineer will transmit to all prospective Bidders of record, such Addenda as Engineer considers necessary, in response to questions arising at conference. Oral statements may not be relied upon and nor binding or legally effective.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 Submit all questions about meaning or intent of Bidding Documents to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions, will be issued by Addenda delivered to all parties recorded as having received Bidding Documents. Questions received less than 10 days prior to date for opening Bids, may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications, will be without legal effect.

7.02 Issue Addenda to clarify, correct, supplement, or change Bidding Documents. Addenda will be issued to document holders by one of these methods:

A. Email notification to document holder with link to download addenda from the PSC Info Exchange web site.

B. For document holders without email, pick up Addenda at issuing PSC office or mail via United States Postal Service (USPS).

ARTICLE 8 – BID SECURITY

8.01 Bid must be accompanied by Bid security, payable to Owner, 5 percent of Bidder's maximum Bid price (determined by adding base bid and all alternates), and by certified check, bank money order, or Bid bond (Section 00 43 13, "Bid Bond") issued by a surety, meeting requirements of Articles 6.01 and 6.02 of General Conditions.

8.02 Bid security of apparent Successful Bidder will be retained until Owner awards Contract and Bidder has executed Contract Documents, furnished required Contract security, and met other conditions of Notice of Award, whereupon Bid security will be released. If Successful Bidder fails to execute and deliver Contract Documents and furnish required Contract security within 15 days after Notice of Award, Owner may consider Bidder in default, annul Notice of Award, and Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.

8.03 Bid security of other Bidders Owner believes have a reasonable chance of receiving award, may be retained by Owner until the earlier of seven days after Effective Date of Contract, or 61 days after Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders Owner believes DO NOT have a reasonable chance of receiving award, will be released within seven days after Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 Number of days or dates by which Work is to be substantially completed and ready for final payment, are set forth in Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, for failure to timely attain Substantial Completion, or completion of Work, in readiness for final payment, are set forth in Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 Contract for Work, as awarded, will based on materials and equipment specified or described in Bidding Documents without consideration during bidding and Contract award process of possible substitute or "or-equal" items. When Contract allows Contractor to request Engineer to authorize use of substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to nor considered by Engineer until after Effective Date of Contract.

11.02 All prices Bidder sets forth in Bid shall be based on the presumption Contractor will furnish materials and equipment specified or described in Bidding Documents, as supplemented by Addenda. Any assumptions regarding possibility of post-Bid approvals, "or-equal," or substitution requests, are made at Bidder's sole risk.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 Bidder shall prepare to retain specific subcontractors, suppliers, or other individuals/entities for Work performance if required by Bidding Documents (most commonly in Specifications) to do so. If prospective Bidder objects to retaining any such subcontractor, supplier, or other individual/entity, and concern is not relieved by Addendum, prospective Bidder should refrain from submitting Bid.

12.02 Subsequent to Bid submittal, Owner may not require Successful Bidder or Contractor to retain any subcontractor, supplier, or other individual/entity against which Contractor has reasonable objection.

12.03 Within five days after Bid opening, apparent Successful Bidder and any other Bidder so requested, shall submit to Owner a list of subcontractors or suppliers proposed for Work.

12.04 If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such subcontractor, supplier, or other individual or entity. After due investigation, if Owner or Engineer, has reasonable objection to any proposed subcontractor, supplier, individual, or entity, Owner may, before Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit substitute, Bidder's Bid price will be increased/decreased by cost difference occasioned by substitution, and Owner may consider price adjustment in evaluating Bids and making Contract award.

12.05 If apparent Successful Bidder declines to make substitution, Owner may award Contract to next lowest Bidder who proposes to use acceptable subcontractors, suppliers, or other individuals/entities. Declining to make requested substitutions, will constitute grounds for Bid security forfeiture of Bidder. Any subcontractor, supplier, individual/entity so listed and against which Owner or Engineer makes no written objection prior to giving Notice of Award, will be deemed acceptable to Owner and Engineer subject to subsequent revocation of acceptance as provided in Article 7.06 of the General Conditions.

ARTICLE 13 – PREPARATION OF BID

13.01 Bid Form is included with Bidding Documents.

A. All blanks on Bid Form shall be completed and Bid Form signed in ink. Erasures or alterations shall be initialed in ink by person signing Bid Form. Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If Bid Form expressly indicates that submitting pricing on specific alternate item is optional and Bidder elects not to furnish pricing for such optional alternate item, Bidder may enter words "No Bid" or "Not Applicable."

13.02 Bid by corporation shall be executed in corporate name by corporate officer (whose title must appear under signature), accompanied by evidence of authority to sign. Show corporate address and state of incorporation.

13.03 Execute Bid by a partnership in partnership name and signed by a partner (whose title must appear under signature), accompanied by evidence of authority to sign. Show official address of partnership.

13.04 Execute Bid by a limited liability company in firm name by a member or other authorized person and accompanied by evidence of authority to sign. Show state of firm formation and official firm address.

13.05 Bid by an individual shall show Bidder's name and official address.

13.06 Execute Bid by a joint venture by an authorized representative of each joint venturer as indicated on Bid Form. Show official address of joint venture.

13.07 Print all names in ink below signatures.

13.08 Bid shall contain acknowledgment of receipt of all Addenda and numbers filled in on Bid Form.

13.09 Show postal and email addresses and phone number for communications regarding Bid.

13.10 Bid shall contain evidence of Bidder authority and qualification to do business in state where Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of Contract, and attach covenant to Bid. Also show Bidder's state contractor license number, if any, on the Bid Form.

ARTICLE 14 – BASIS OF BID

14.01 Lump Sum

A. Bidders shall submit Bid on a lump sum basis as set forth in Bid Form.

14.02 Unit Price

A. Bidders shall submit Bid on unit price basis for each item of Work listed in unit price section of Bid Form.

B. "Bid Price" (or "extended price") for each unit price Bid item, will be the product of "Estimated Quantity" (which Owner or representative set forth in Bid Form) for item and corresponding "Bid Unit Price" offered by Bidder. Total of all unit price Bid items will be the sum of these "Bid Prices;" total will be used by Owner for Bid comparison purposes. Final quantities and Contract Price determined per Article 13.03 of General Conditions.

C. Discrepancies between multiplication of Work units and unit prices, will be resolved in favor of unit prices. Discrepancies between indicated sum of any column of figures and correct sum thereof, will be resolved in favor of correct sum. I-14-01 gives several frequently-used alternatives for defining basis and determination of Bid prices for comparison purposes of Bids. For particular project, a unique set of Articles may be necessary, following the concept shown. User should carefully review I-14.01 and compare to final Bid Form for clarity and consistency.

ARTICLE 15 – SUBMITTAL OF BID

15.01 Bidder shall submit Bid Form, Bid security and other documents required to submit under terms of Article 7 of Bid Form.

15.02 Bid shall be received no later than date and time prescribed and at place indicated in Section 00 11 13, "Advertisement," and enclose in plainly-marked package with Project title (and, if applicable, designated portion of Project Bid is submitted), name and address of Bidder, and shall be accompanied by Bid security and other required documents. If Bid is sent by mail or other delivery system, sealed envelope containing Bid shall be enclosed in a separate package, plainly-marked on outside with "*BID ENCLOSED*."

15.03 Bids received after date and time prescribed for Bid opening, or not submitted at correct location or in designated manner, will not be accepted and will be returned to Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 Bid may be withdrawn by appropriate document duly executed in same manner a Bid must be executed and delivered to place where Bids are to be submitted prior to date and time for Bid opening. Upon receipt of such notice, unopened Bid will be returned to Bidder.

16.02 If Bidder wishes to modify Bid prior to Bid opening, Bidder must withdraw initial Bid in manner specified in Article 16.01 and submit new Bid prior to date and time for Bid opening.

16.03 If within 24 hours after Bids are opened, any Bidder files a duly-signed, written notice with Owner and promptly thereafter demonstrates to reasonable satisfaction of Owner there was material and substantial mistake in Bid preparation, Bidder may withdraw Bid and Bid security returned. Thereafter, if Work is rebid, Bidder will be disqualified from further bidding on Work.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at time and place indicated in Section 00 11 13, "Advertisement," and unless obviously non-responsive, read aloud publicly. An abstract of amounts of base Bids and major alternates, if any, will be made available to Bidders after Bid opening.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for time stated in Bid Form, but Owner may, at sole discretion, release any Bid and return Bid security prior to end of period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject Bid of any Bidder Owner finds, after reasonable inquiry and evaluation, not responsible. If Bidder purports to add terms or conditions to Bid, takes exception to any provision of Bidding Documents, or attempts to alter contents of Contract Documents for purposes of Bid, Owner will reject Bid as nonresponsive; provided Owner also reserves right to waive all minor informalities not involving price, time, or changes in Work.

19.02 If Owner awards contract for Work, award shall be to the Bidder who provides gods or services at the best value for the City.

19.03 Evaluation of Bids

A. In evaluating Bids, Owner will consider if Bids comply with prescribed requirements, and such alternates, unit prices, and other data, as requested in Bid Form or prior to Notice of Award.

B. Responses will undergo an evaluation process conducted by members of the City and Parkhill. In evaluating Bids for the best value Bid, the total points possible collective4ly shall be 100. The maximum number of points criteria will be as follows:

1. 60 points Bid Price

2. 20 points Quality of past Work

3. 10 points Experience and reputation of key personnel.

4. 10 points History of completion of projects on time.

19.04 In evaluating if Bidder is responsible, Owner will consider Bidder qualifications and may consider qualifications and experience of subcontractors and Suppliers proposed for portions of Work identity of subcontractors and Suppliers must be submitted as provided in Bidding Documents.

19.05 Owner may conduct investigations as Owner deems necessary to establish responsibility, qualifications, and financial ability of Bidder and any proposed subcontractor or Supplier.

ARTICLE 20 – BONDS AND INSURANCE

20.01 Article 6 of General Conditions, as may be modified by Supplementary Conditions, sets forth Owner requirements as to performance, payment bonds, and insurance. When Successful Bidder delivers Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues Notice of Award to Successful Bidder, it shall be accompanied by unexecuted counterparts of Agreement along with other Contract Documents as identified in Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver required counterpart number of Agreement (and bonds and insurance documentation required by Contract Documents) to Owner. Within 10 days thereafter, Owner shall deliver one fully executed counterpart of Agreement to Successful Bidder.

ARTICLE 22 – SALES AND USE TAXES

22.01 Owner is exempt from state sales and use taxes on materials and equipment to be incorporated in Work. Said taxes shall not be included in Bid. Refer to Section 00 52 20 “Contract for Construction, Article 7.08, for additional information.

SECTION 00 41 00 - BID FORM

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Midland
300 North Loraine
Midland Texas 79701

1.02 Undersigned Bidder proposes and agrees, if Bid accepted, to enter Agreement with Owner in form included in Bidding Documents, to perform all Work as specified or indicated in Bidding Documents for prices and within times indicated in this Bid, per other terms and conditions of Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all terms and conditions of Section 00 21 13 "Instructions to Bidders," including without limitation, those dealing with disposition of Bid security. This Bid remains subject to acceptance 60 days after Bid opening, or for such longer time Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting Bid, Bidder represents:

A. Bidder examined and carefully studied Bidding Documents, and any data and reference items identified in Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date

B. Bidder visited the Site, conducted a thorough and alert visual examination of Site and adjacent areas, is familiar with and satisfied as to general, local, and Site conditions that may affect cost, progress, and performance of Work.

C. Bidder is familiar with and satisfied as to laws and regulations that may affect cost, progress, and performance of Work.

D. Bidder carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to Site and all drawings of physical conditions relating to existing surface or subsurface structures at Site identified in Section 00 52 20 "Contract for Construction," especially with respect to Technical Data in such reports and drawings; and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to Site identified in the Section 00 52 20 "Contract for Construction," especially with respect to Technical Data in such reports and drawings.

E. Bidder considered: information known to Bidder, information commonly known to contractors doing business near Site, information and observations obtained from Site visits, Bidding Documents, and any

Site-related reports and drawings identified in Bidding Documents, with respect to effect of such information, observations, and documents on (1) cost, progress, and performance of Work; (2) means, methods, techniques, sequences, and procedures of construction employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on information and observations referred to in Article 3.01.E, no further examinations, investigations, explorations, tests, studies, or data are necessary to determine Bid for performance of Work at price bid and within times required, per other terms and conditions of Bidding Documents.

G. Bidder is aware of general nature of work performed by Owner and others at Site that relates to Work as indicated in Bidding Documents.

H. Bidder gave Engineer written notice of all conflicts, errors, ambiguities, or discrepancies Bidder discovered in Bidding Documents, and confirms written resolution thereof by Engineer, is acceptable to Bidder.

I. Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing Work.

J. Submission of Bid constitutes an incontrovertible representation by Bidder that Bidder complied with every requirement of this Article, and without exception, Bid and all prices in Bid are premised upon performing and furnishing Work required by Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies:

A. Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity nor submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for Contract. For Article 4.01.D:

1. Corrupt Practice: Offering, giving, receiving, or soliciting anything of value likely to influence action of a public official in bidding process;

2. Fraudulent Practice: Intentional misrepresentation of facts made to (a) influence bidding process to detriment of Owner, (b) establish bid prices at artificial noncompetitive levels, or (c) deprive Owner of benefits of free and open competition;

3. Collusive Practice: Scheme or arrangement between two or more Bidders, with or without Owner knowledge, to establish bid prices at artificial, noncompetitive levels; and

4. Coercive Practice: Harming or threatening to harm, directly or indirectly, persons or property to influence participation in bidding process or affect Contract execution.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete Work per Contract Documents for the following price(s):

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
BASE BID					
1.	Mobilization/Demobilization	LS	1	$	$
2.	6" C900 PVC DR 18 Water Main	LF	180	$	$
3.	12" C900 PVC DR 18 Water Main	LF	3,007	$	$
4.	Warning Tape and Tracer Wire	LF	3,297	$	$
5.	Remove Ductile Iron Fittings	LS	1	$	$
6.	Ductile Iron Fittings	TON	3.1	$	$
7.	24" Steel Casing (0.375") in Open Trench	LF	40	$	$
8.	24" Steel Casing (0.375") in Bore	LF	55	$	$
9.	12" C900 PVC DR 18 Slick Bore	LF	85	$	$
10.	12" x 6" Tapping Sleeve with 6" Gate Valve and Box	EA	1	$	$
11.	6" Gate Valve and Box	EA	8	$	$
12.	12" Gate Valve and Box	EA	7	$	$
13.	12" Water Main Cap	EA	1	$	$
14.	Fire Hydrant	EA	9	$	$
15.	Air Valve and Vault	EA	1	$	$
16.	Connect to Existing Water Main	EA	5	$	$
17.	Asphalt Pavement Removal and Replacement	SY	140	$	$
18.	Concrete Pavement Removal and Replacement	SY	10	$	$
19.	Concrete Rip Rap Removal and Replacement	SY	31	$	$
20.	Concrete Curb and Gutter Removal and Replacement	LF	39	$	$
21.	Tree Removal	EA	1	$	$
22.	Flood Gauge Removal and Replacement	EA	1	$	$
23.	Traffic Control	LS	1	$	$
TOTAL OF ALL UNIT BASE BID ITEMS					**$**

Bidder acknowledges (1) each Bid Unit Price includes an amount considered by Bidder adequate to cover Contractor overhead and profit for each separately identified item; and (2) estimated quantities are not guaranteed, solely to compare Bids, and final payment for all unit price Bid items based on actual quantities, determined as provided in Contract Documents.

Bidder acknowledges estimated quantities not guaranteed, solely to compare Bids, and final payment for all unit price Bid items based on actual quantities, determined as provided in Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees Work is substantially complete, completed, and ready for final payment per Section 00 52 20 "Contract for Consideration," Article 4.01.A, on or before dates or within number of calendar days indicated in Agreement.

6.02 Bidder accepts provisions of Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Required Bidder Qualification Statement with Supporting Data.

ARTICLE 8 – DEFINED TERMS

8.01 Terms used in this Bid with initial capital letters have meanings stated in Sections 00 21 13 "Instructions to Bidders," and 00 52 20 "Contract for Construction."

ARTICLE 9 – ADDITIONAL CITY OF MIDLAND CITY REQUIREMENTS

9.01 PUBLIC INFORMATION

A. To the extent that "Bidder" is submitting a bid for a contract described by Section 552.371 of the Texas Government Code, "Bidder" agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this bid, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

9.02 VERIFICATION

A. To the extent that Tex. Gov't Code section 2270.002 applies to this Contract, Contractor hereby verifies that Contractor does not boycott Israel and will not boycott Israel during the term of this Contract. If Tex. Gov't Code section 2270.002 does not apply to this Contract, such verification is not required, and Contractor shall be deemed to have not made such verification.

9.03 RECORDS RETENTION AND PRODUCTION OF INFORMATION

A. To the extent that this "Contract" as appropriate is a contract described by Section 552.371 of the Texas Government Code, Contractor shall (1) preserve all contracting information related to the "Contract" as provided by the records retention requirements applicable to the "City of Midland," for the duration of the contract, (2) promptly provide to the "City of Midland" any contracting information related to the "Contract" that is in the custody or possession of Contractor on request of the "City of Midland", and (3) on completion of the "Contract," either (i) provide at no cost to the "City of Midland" all contracting information related to the Contract that is in the custody or possession of "Contractor," or (ii) preserve the contracting information related to the "Contract" as provided by the records retention requirements applicable to the "City of Midland."

9.04 PUBLIC INFORMATION

A. To the extent that this "Contract" is a contract described by Section 552.371 of the Texas Government Code, "Contractor" agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this contract, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

ARTICLE 10 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

_____

By:*[Signature]* _____

[Printed name] _____

If Bidder is a corporation, limited liability company, partnership, or joint venture, attach evidence of authority to sign.

Attest:*[Signature]* _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for notices:

_____

_____

_____

Phone Number: _____

Fax Number: _____

Contact Name and email address: _____

_____

SECTION 00 43 13 - BID BOND

Any singular reference to Bidder, Surety, Owner or other party considered plural where applicable.

BIDDER *(Name and Address)*:

_____
_____
_____

SURETY *(Name and Address of Principal Place of Business)*:

_____
_____
_____

OWNER *(Name and Address)*:

City of Midland
300 North Loraine
Midland Texas 79701

BID

Bid Due Date: _____

Description *(Project Name including location)*:

Midland Water System Improvements; Business 20 and San Andres Water Main Extension

BOND

Bond Number: _____

Date: _____

Penal sum: _____ $ _____
(Words) (Figures)

Surety and Bidder, intending legally bound hereby, subject to terms set forth, do each cause Bid Bond duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
_____ (Seal)	_____ (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	**By**: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title

Attest: _____ **Attest**: _____

Signature Signature

_____ _____

Title Title

Addresses used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, heirs, executors, administrators, and successors, and assigns to pay Owner, upon default of Bidder, penal sum set forth on Bond. Payment of penal sum is extent of Bidder's and Surety's liability. Recovery of such penal sum under terms of this Bond, shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon Bidder's failure to deliver within time required by Bidding Documents (or any extension thereof agreed to in writing by Owner), executed Agreement required by Bidding Documents, and any performance and payment bonds required by Bidding Documents.

3. This obligation null and void if:

   3.1 Owner accepts Bidder's Bid and Bidder delivers within time required by Bidding Documents (or any extension thereof agreed to in writing by Owner), executed Agreement required by Bidding Documents, and any performance and payment bonds required by Bidding Documents.
   3.2 All Bids are rejected by Owner; or
   3.3 Owner fails to issue a Notice of Award to Bidder within time specified in Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Article 5 hereof).

4. Payment under this Bond is due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice given with reasonable promptness, identifying this Bond, Project, and including a statement of amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located

in the state where Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at respective addresses shown on this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage prepaid, and deemed effective upon receipt by concerned party.

9. Surety shall attach to this Bond a current and effective Power of Attorney evidencing authority of officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute omitted from this Bond, shall be deemed included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, provision of said statute shall govern and remainder of this Bond not in conflict therewith, shall continue in full force and effect.

11. "Bid," as used herein, includes a Bid, offer, or proposal, as applicable.

SECTION 00 45 13 – BIDDER'S QUALIFICATIONS STATEMENT

INFORMATION SUPPLIED IS CONFIDENTIAL TO EXTENT PERMITTED BY LAWS AND REGULATIONS
All questions must be answered, and data given clear and comprehensive. If necessary, questions may be answered on separate attached sheets. Bidder may submit any additional information.

1. SUBMITTED BY:

Official Name of Firm: _____

Address: _____

_____

_____

2. SUBMITTED TO: _____

3. SUBMITTED FOR: _____

Owner: City of Midland

Project Name: Water System Improvements

Business 20 and San Andres Water Main Extension

TYPE OF WORK: Furnishing and installing approximately 3,000 linear feet of new 12-inch buried water main and associated appurtenances.

4. CONTRACTOR'S CONTACT INFORMATION

Contact Person: _____

Title: _____

Phone: _____

Email: _____

5. AFFILIATED COMPANIES:

Name: _____

Address: _____

_____

_____

6. TYPE OF ORGANIZATION:

☐ SOLE PROPRIETORSHIP

Name of Owner: _____

Doing Business As: _____

Date of Organization: _____

☐ PARTNERSHIP

Date of Organization: _____

Type of Partnership: _____

Name of General Partner(s): _____

_____

_____

☐ CORPORATION

State of Organization: _____

Date of Organization: _____

Executive Officers:

- President: _____

- Vice President(s): _____

_____

_____

- Treasurer: _____

- Secretary: _____

☐ LIMITED LIABILITY COMPANY

State of Organization: _____

Date of Organization: _____

Members: _____

_____

_____

_____

☐ JOINT VENTURE

Sate of Organization: _____

Date of Organization: _____

Form of Organization: _____

Joint Venture Managing Partner

- Name: _____

- Address: _____

_____

_____

Joint Venture Managing Partner

- Name: _____

- Address: _____

_____

Joint Venture Managing Partner

- Name: _____

- Address: _____

_____

7. LICENSING

Jurisdiction: _____

Type of License: _____

License Number: _____

Jurisdiction: _____

Type of License: _____

License Number: _____

8. CERTIFICATIONS CERTIFIED BY:

Disadvantage Business Enterprise: _____

Minority Business Enterprise: _____

Woman Owned Enterprise: _____

Small Business Enterprise: _____

Other (_____): _____

9. BONDING INFORMATION

Bonding Company: _____

Address: _____

_____

Bonding Agent: _____

Address: _____

_____

_____

Contact Name: _____

Phone: _____

Aggregate Bonding Capacity: _____

Available Bonding Capacity as of date of this submittal: _____

10. FINANCIAL INFORMATION

Financial Institution: _____

Address: _____

_____

Account Manager: _____

Phone: _____

11. CONSTRUCTION EXPERIENCE:

Current Experience: List on **Schedule A**, all uncompleted projects currently under contract. If Joint Venture, list each participant's projects separately.

Previous Experience: List on **Schedule B**, all projects completed within the last five years. If Joint Venture list each participant's projects separately.

Has firm listed in Section 1 ever failed to complete a construction contract awarded? ☐YES ☐NO
If YES, attach details including Project Owner's contact information.

Has any Corporate Officer, Partner, Joint Venture participant, or Proprietor ever failed to complete a construction contract awarded in their name or when acting as a principal of another entity? ☐YES ☐NO
If YES, attach details including Project Owner's contact information.

Are there any judgments, claims, disputes, pending litigation, or outstanding litigation involving the firm listed in Section 1, any officers, or any partners (if partnership or any individual entities if a joint venture)?
☐YES ☐ NO If YES, attach details including Project Owner's contact information.

12. EQUIPMENT:

List on **Schedule C**, all pieces of major equipment available for use on Owner's Project.

I hereby certify information submitted herewith, including any attachments, is true to the best of my knowledge and belief.

NAME OF ORGANIZATION: _____

BY: _____

TITLE: _____

DATED: _____

NOTARY ATTEST:

SUBSCRIBED AND SWORN TO BEFORE ME

THIS _____ DAY OF _____, 20___

NOTARY PUBLIC - STATE OF _____

MY COMMISSION EXPIRES:_____

REQUIRED ATTACHMENTS

1. Schedule A (Current Experience).
2. Schedule B (Previous Experience).
3. Schedule C (Major Equipment).
4. Evidence of authority for individuals listed in Section 7 to bind organization to an agreement.
5. Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
6. Additional items as pertinent.

SCHEDULE A

CURRENT EXPERIENCE

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SCHEDULE C
LIST OF MAJOR EQUIPMENT AVAILABLE

ITEM	PURCHASE DATE	CONDITION	ACQUIRED VALUE

THE CITY OF MIDLAND

CONTRACT

Contract No. 22003826

THIS CONTRACT, effective the ___ day of _____, 20__, by and between the City of Midland, hereinafter referred to as "CITY", and _____, hereinafter referred to as "COMPANY", is made for the following considerations:

1. **Cost:** Total Proposal: $ _____ DOLLARS

2. **Scope of Work:** COMPANY shall perform all work described for Water System Improvements at Business 20 and San Andres Water Main Extension in the following documents, attached hereto and incorporated herein by reference for all legal purposes.

EXHIBIT A..... Specifications, Proposal or Cost Summary
EXHIBIT B.....Intentionally Omitted
EXHIBIT C..... Bonding instructions for Public Works Contract of $50,000 and more
EXHIBIT D..... Wage Scale

3. **City:** The words "CITY's Representative" or "representative" shall mean Carl Craigo or the designee under whose supervision these contract documents, including the plans and specifications, were prepared, or who may inspect work performed under this Contract; or such other representative, supervisor, or inspector as may be authorized by CITY to act in any particular capacity under this Contract.

4. **City's Representative:** CITY's Representative may make periodic visits to the site to observe the progress and quality of the executed work and to determine, in general, if the work is proceeding in accordance with the contract documents. CITY's representative will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work, nor will such representative be responsible for the construction means, methods, techniques, sequences or procedures, or the safety precautions incident thereto. CITY's representative will not be responsible for COMPANY's failure to perform the work in accordance with the contract.

5. **Company:** Unless otherwise stipulated, COMPANY shall provide and pay for all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and all water, light, power, fuel,

transportation and all other facilities necessary for the execution and completion of the work covered by the contract documents. Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of a good quality. COMPANY shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

5.1. COMPANY shall, at its expense, obtain all permits and licenses necessary for the performance of this contract and pay all fees and taxes required by law, and comply with all laws, ordinances, rules and regulations governing COMPANY's performance of the contract, including all environmental laws and regulations, whether state or federal.

5.2. All work shall be done and all materials furnished in strict conformity with the contract and specifications.

6. **Minor Work Not Mentioned:** All minor detail of the work not specifically mentioned in the Specifications but obviously necessary for the proper completion of the work, such as the proper connection of new work to old, shall be considered as incidental to and a part of the work for which the prices are named in the contract. COMPANY will not be entitled to any additional compensation therefor unless specifically stated otherwise. Otherwise the term "extra work" as used in this contract shall mean and include all work that may be required by CITY to be done by COMPANY to accomplish any alteration or addition to the work as shown on the Specifications.

6.1. COMPANY shall perform all extra work under the direction of CITY's Representative when presented with a written work order signed by CITY's Representative, subject, however, to the right of the COMPANY to require written confirmation of such extra work order by CITY. Payment for extra work shall be as agreed in the work order.

7. **Safety:** COMPANY shall at all times exercise reasonable precaution for the safety of employees and others on or near the work and shall comply with all applicable provisions of federal, state and municipal laws. All machinery and equipment and other physical hazards shall be guarded in accordance with federal, state or municipal laws or regulations.

8. **INDEMNITY: COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, LOSSES, PROPERTY DAMAGE AND EXPENSES OF ANY CHARACTER WHATSOEVER, INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR**

PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF COMPANY, THEIR AGENTS OR EMPLOYEES, OR ANY SUBCONTRACTOR, IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES. THE OBLIGATIONS CONTAINED IN THIS SECTION 8 SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

8.1. **COMPANY SHALL INDEMNIFY AND HOLD HARMLESS AND DEFEND CITY AND ALL OF CITY'S OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, CLAIMS, DAMAGES, PERSONAL INJURIES, ACCIDENTAL DEATH, PROPERTY DAMAGE, LOSSES, AND EXPENSES OF ANY CHARACTER WHATSOEVER INCLUDING ATTORNEY'S FEES, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ON ACCOUNT OF ANY NEGLIGENT ACT OF CITY, CITY'S OFFICERS, AGENTS AND EMPLOYEES, WHETHER SUCH NEGLIGENT ACT WAS THE SOLE PROXIMATE CAUSE OF THE INJURY OR DAMAGE OR A PROXIMATE CAUSE JOINTLY AND CONCURRENTLY WITH COMPANY OR COMPANY'S EMPLOYEES, AGENTS OR SUBCONTRACTORS NEGLIGENCE IN THE EXECUTION, SUPERVISION AND OPERATIONS GROWING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF THIS CONTRACT, AND COMPANY WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS OR EMPLOYEES, INCLUDING ATTORNEY'S FEES. THE OBLIGATIONS CONTAINED IN THIS SECTION 8.1 SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.**

8.2. **COMPANY AGREES THAT IT WILL INDEMNIFY AND SAVE CITY HARMLESS FROM ALL CLAIMS GROWING OUT OF ANY DEMANDS OF SUBCONTRACTORS, LABORERS, WORKMEN, MECHANICS, MATERIALMEN, AND FURNISHERS OF MACHINERY AND PARTS THEREOF, EQUIPMENT, POWER TOOLS AND ALL SUPPLIES, INCURRED IN THE FURTHERANCE OF THE PERFORMANCE OF THIS CONTRACT. WHEN CITY SO DESIRES, COMPANY SHALL FURNISH SATISFACTORY EVIDENCE THAT ALL OBLIGATIONS OF THE NATURE HEREINABOVE DESIGNATED HAVE BEEN PAID, DISCHARGED OR WAIVED. COMPANY, ITS SURETIES AND INSURANCE CARRIERS SHALL DEFEND, INDEMNIFY AND SAVE HARMLESS CITY AND**

ALL OF ITS OFFICERS, AGENTS AND EMPLOYEES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY CHARACTER WHATSOEVER, BROUGHT FOR OR ON ACCOUNT OF ANY INJURIES OR DAMAGES RECEIVED OR SUSTAINED BY ANY PERSON OR PERSONS OR PROPERTY, ARISING FROM ANY ACT OF COMPANY OR ANY SUBCONTRACTOR, THEIR AGENTS OR EMPLOYEES, IN THE EXECUTION AND SUPERVISION OF THIS CONTRACT, AND WILL BE REQUIRED TO PAY ANY JUDGMENT WITH COSTS WHICH MAY BE OBTAINED AGAINST CITY OR ANY OF ITS OFFICERS, AGENTS, OR EMPLOYEES INCLUDING ATTORNEY'S FEES. THE OBLIGATIONS CONTAINED IN THIS SECTION 8.2 SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

9. **Start of Work:** COMPANY shall commence work no later than ten (10) days after receipt of the execution of this document or other written release to proceed and shall complete such work no later than calendar days after release to proceed.

10. **Clean Up:** COMPANY shall promptly remove from CITY's premises all materials condemned by CITY's Representative on account of failure to conform to the contract, whether actually incorporated in the work or not, and COMPANY shall at its own expense promptly replace such condemned materials with other materials conforming to the requirements of the contract. COMPANY shall also bear the expense of restoring all work of other contractors damaged by any such removal or replacement. If COMPANY does not remove and replace any such condemned materials within a reasonable time after a written notice by CITY, CITY may remove and replace such at COMPANY's expense.

11. **Warranty:** Neither the final payment nor any provision in this contract shall relieve COMPANY of responsibility for faulty materials or workmanship, and he shall remedy any defects due thereto and pay for any damage to other work resulting therefrom, which shall appear within a period of one (1) year from the date of substantial completion. CITY shall give notice of observed defects with reasonable promptness.

12. **Remedy:** CITY may, on account of subsequently discovered evidence, withhold whole or part of any payment to such extent as may be necessary to protect itself from loss on account of:

12.1. Defective work not remedied; or

12.2. Claims filed or reasonable evidence indicating possible filing of claims; or

12.3. Failure of COMPANY to make payments promptly to subcontractors or for material or labor which CITY may pay as an agent for the COMPANY; or

12.4. Damages to another contractor or subcontractor.

When the above grounds to withhold payment are removed, or COMPANY provides a surety bond satisfactory to CITY, which will protect CITY in the amount withheld, payment may be released.

13. **Funding Out:** In the event no funds or insufficient funds are appropriated and budgeted or are otherwise unavailable in any fiscal period for contract payments due under the contract, then this contract shall terminate on the last day of the fiscal period for which full appropriations were made, without penalty or expense to CITY of any kind whatsoever.

14. **Wage Scale:** COMPANY agrees to pay all workmen in his employ no less than the generally prevailing wage rate for employees of similar category in the Permian Basin Area, as is depicted in the wage rate scale attached hereto as EXHIBIT D, and incorporated herein by reference for all legal purposes.

14.1. If applicable, the Davis-Bacon Act, 29 CFR 5.5, and any related acts or regulations are hereby incorporated by reference and made a part of this Contract, and all terms and requirements under said laws, by such incorporation, are made terms and requirements of this Contract, to which the parties to this Contract have agreed to be bound.

15. **Prompt Pay Act:** CITY and COMPANY agree that Texas Government Code, Chapter 2251, Payment for Goods and Services (the "Prompt Pay Act") does not waive governmental immunity.

16. **Payment; Retainage:** After all work is completed by COMPANY, including all Change Orders altering the original scope and amount of the contract are completed, and the CITY has inspected and approved that the work is completed and in compliance with the contract and all subsequent Change Orders, the CITY may thereafter issue payment to COMPANY in the amount of the contract and all Change Orders. The CITY shall be the final judge of when the work is completed by COMPANY. The CITY, in its sole discretion, shall determine if the work under the contract and under any Change Orders has been done to the CITY's requirements.

16.1. The CITY may make periodic payments to COMPANY; provided, however, such periodic payments may only be made pursuant to this section, and only after all work and all Change Orders are completed by COMPANY and approved by the CITY. The approval shall be in the CITY's sole discretion. Requests for progress payments may be made to the extent of the materials and labor completed at the end of each month. Upon approval by the CITY or the CITY's representative, the request and invoice shall be forwarded for payment less 5% retainage. The total of these payments shall not exceed 95% of the total contract amount.

17. **Late Completion; Liquidated Damages:** It is hereby understood and mutually agreed, by and between COMPANY and the CITY, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the "Notice to Proceed." COMPANY agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between COMPANY and the CITY, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

17.1. In the event COMPANY shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the CITY, then COMPANY and COMPANY's surety, if any, shall be liable for and does hereby agree, as a part consideration for the awarding of this contract, to pay to the CITY $500.00, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every day that COMPANY shall be in default after the time stipulated in the contract for completing the work. Further, the CITY shall have the right to cancel this contract for such delay. In the event the CITY cancels this contract pursuant to the terms of this section, the CITY shall pay to COMPANY only those monies deemed appropriate by the CITY, in its sole discretion, to compensate COMPANY for any work actually performed, less any liquidated damages COMPANY owes the CITY.

17.2. The said amount is fixed and agreed upon by and between COMPANY and the CITY because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the CITY would in such event sustain, and said amount is agreed to be the amount of damages which the CITY would sustain and said amount shall be retained from time to time by the CITY from current periodical estimates.

17.3. It is further agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided, that COMPANY shall not be charged with liquidated damages or any excess cost when the CITY determines, in its sole discretion, that COMPANY is without fault and COMPANY's reasons for the time extension are acceptable to the CITY. Provided, further, that COMPANY shall not be charged with liquidated damages of any excess cost when the delay in completion of the work is due:

a. To any preference, priority or allocation order duly issued by the Government;

b. To unforeseeable cause beyond the control and without the fault or negligence of COMPANY, including, but not restricted to, acts of God, or of the public enemy, acts of the CITY, acts of another contractor in the performance of a contract with the CITY, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and

c. To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

17.4. Provided, further, that COMPANY shall, within ten (10) days from the beginning of such delay, unless the CITY shall, in its sole discretion grant a further period of time prior to the date of final settlement of the contract, notify the CITY, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify COMPANY within a reasonable time of its decision in the matter.

17.5. **COMPANY AGREES THAT THE PAYMENT OF SUCH LIQUIDATED DAMAGES MAY BE RECOVERED BY THE CITY FROM RETAINAGE HELD BY THE CITY. NOTWITHSTANDING ANY OTHER PROVISION HEREOF, COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY, CITY'S EMPLOYEES AND OFFICERS FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER ARISING FROM THE CITY WITHHOLDING PAYMENT FROM COMPANY AS LIQUIDATED DAMAGES FOR COMPANY'S FAILURE TO COMPLETE THE WORK WITHIN THE TIME SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE.**

17.6. **COMPANY SHALL RECEIVE NO FINANCIAL COMPENSATION FOR DELAY OR HINDRANCE TO THE WORK. IN NO EVENT SHALL THE CITY BE LIABLE TO COMPANY OR ANY SUBCONTRACTOR OR SUPPLIER, ANY OTHER PERSON OR ANY SURETY FOR OR ANY EMPLOYEE OR AGENT OF ANY OF THEM, FOR ANY DAMAGES ARISING OUT OF OR ASSOCIATED WITH ANY DELAY OR HINDRANCE TO THE WORK, REGARDLESS OF THE SOURCE OF THE DELAY OR HINDRANCE, INCLUDING EVENTS OF FORCE MAJEURE, AND EVEN IF SUCH DELAY OR HINDRANCE RESULTS FROM, ARISES OUT OF OR IS DUE, IN WHOLE OR IN PART, TO THE NEGLIGENCE OF THE CITY. COMPANY'S SOLE REMEDY IN ANY SUCH CASE SHALL BE AN EXTENSION OF TIME.**

18. **No Third Party Beneficiary:** CITY's approval of this contract does not create a third party

beneficiary. There is no third party beneficiary to this contract. No person or entity who is not a party to this contract shall have any third party beneficiary or other rights hereunder.

19. WAIVER OF ATTORNEY FEES: BY EXECUTING THIS CONTRACT, COMPANY AGREES TO WAIVE AND DOES HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM IT HAS OR MAY HAVE IN THE FUTURE AGAINST CITY REGARDING THE AWARD OR ATTORNEY'S FEES, WHICH ARE IN ANY WAY RELATED TO THIS CONTRACT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THIS CONTRACT. COMPANY SPECIFICALLY AGREES THAT IF COMPANY BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING RELATED TO THIS CONTRACT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS CONTRACT, INCLUDING, BUT NOT LIMITED TO, ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, COMPANY AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEY'S FEES TO WHICH COMPANY MIGHT OTHERWISE BE ENTITLED.

COMPANY AGREES THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY-EXISTING KNOWN RIGHT. COMPANY ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THIS CONTRACT. COMPANY FURTHER ACKNOWLEDGES AND AGREES THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN CITY AND COMPANY. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OR GOVERNMENTAL IMMUNITY AND SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

COMPANY IS RELYING ON ITS OWN JUDGMENT. COMPANY HAD THE OPPORTUNITY TO DISCUSS THIS CONTRACT WITH COMPETENT LEGAL COUNSEL PRIOR TO ITS EXECUTION. THE OBLIGATIONS CONTAINED IN THIS SECTION 18 SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

20. **Governmental Immunity:** By executing this contract CITY is not waiving its right of governmental immunity. CITY is retaining its immunity from suit. CITY is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF GOVERNMENTAL IMMUNITY.

21. **Insurance:**

COMPANY shall at all times during the term of this Contract maintain and keep in full force and effect insurance in the following types and minimum amounts with companies authorized to do business in the State of Texas:

Commercial General Liability (including Contractual liability):	
-Personal Injury:	$1,000,000.00 per person
	$1,000,000.00 per occurrence
-Property Damage:	$500,000.00 per occurrence
Business Automobile Liability:	$250,000.00 combined single limit -
	Personal Injury and Property Damage
Workers' Compensation:	Statutory limits
Employers' Liability:	$500,000.00 per accident or occurrence

The Commercial General Liability shall be on a per project aggregate, including completed operations, and shall be on a claims-occurred basis. This insurance shall name CITY as an additional insured and waive subrogation in favor of CITY.

The Business Automobile Liability insurance provided by COMPANY shall cover any auto for bodily injury and property damage, including owned vehicles, hired and non-city vehicles, and employee non-ownership, and the amount of such policy shall be a minimum of $250,000.00 covering any vehicle used for the execution of the work that is the subject of this Contract. This insurance shall name CITY as an additional insured and waive subrogation in favor of CITY.

The Workers' Compensation coverage provided by COMPANY shall inure to the benefit of employees injured during the course and scope of their employment by COMPANY pursuant to this Contract. The Workers' Compensation shall waive all rights of subrogation in favor of CITY.

All insurance required pursuant to this Contract shall provide for a waiver of subrogation in favor of CITY. All insurance required pursuant to this Contract, except for Workers' Compensation Insurance, shall name CITY as an additional insured on a claims occurred basis. CITY shall be provided the notice by COMPANY's insurance provider not later than thirty (30) days prior to any reduction or termination of such coverage.

COMPANY shall contractually require all contractors, subcontractors, and sub-subcontractors that work on any portion of the work that is the subject of this Contract to obtain insurance coverage that meets or exceeds the policy requirements and minimum amounts specified herein. All contractors, subcontractors, and sub-subcontractors shall obtain insurance policies that provide blanket waivers of

subrogation in favor of the City of Midland and policies that name the City of Midland as an additional insured on a claims occurred basis (except workers' compensation).

The parties agree that, prior to the execution of the Contract, COMPANY shall provide one or more certificates of insurance specifically stating that these requirements have been met and subject to the approval of CITY. CITY shall not be required to provide any insurance whatsoever pursuant to this Contract.

COMPANY certifies that the certificate of insurance provided as required herein complies with the requirements of Chapter 1811 of the Texas Insurance Code. COMPANY shall not use an unapproved certificate of insurance or insert inappropriate language on a certificate. Compliance with state law is the sole responsibility of COMPANY.

22. **Assignment**: COMPANY shall not, either directly or indirectly, assign all or any part of this Contract or any interest, right or privilege herein, without the prior written consent of CITY. The issue on whether or not to grant consent to an assignment is in the sole discretion of CITY.

23. **RELEASE: NOTWITHSTANDING ANY OTHER PROVISION CONTAINED HEREIN, COMPANY HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY AND CITY'S COUNCIL MEMBERS, EMPLOYEES, AND OFFICERS FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER THAT COMPANY HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING, BUT NOT LIMITED TO, BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, OR CITY'S NEGLIGENCE. THE OBLIGATIONS CONTAINED IN THIS SECTION SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.**

24. **Governing Law and Venue:** This contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this contract shall be deemed to have occurred in Midland County, Texas. The obligations and undertakings of each of the parties to this Agreement shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this contract or the performance of this contract shall be in Midland County, Texas.

25. **Independent Contractor:** COMPANY shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant, or employee of CITY. COMPANY shall have exclusive control of, and the exclusive right to control the details of the services and work to be

performed hereunder, and all persons performing the same. COMPANY shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors and the doctrine of respondeat superior shall not apply as between CITY and COMPANY, its officers, agents, employees, contractors and subcontractors. Nothing in this Contract shall be construed as creating a partnership or joint enterprise between CITY and COMPANY. No person performing any of the work and services described hereunder by COMPANY shall be considered an officer, agent, servant or employee of CITY. Further, it is specifically understood and agreed that nothing in this contract is intended or construed as creating a "Community of Pecuniary Interest" or an "Equal Right of Control" which would give rise to vicarious liability.

COMPANY shall be an independent contractor under this Contract and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor hereunder. CITY does not have the power to direct the order in which the work is done. CITY shall not have the right to control the means, methods or details of COMPANY's work. COMPANY shall assume exclusive responsibility for the work. COMPANY is entirely free to do the work in its own way.

26. **Notice of Alleged Breach; Statutory Prerequisites:** As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Contract, COMPANY or its legal representative, shall give the City Manager, or any other reasonable official of CITY, notice in writing (consisting of one (1) original and seven (7) copies of notice attached to a copy of this Contract) of such damages, duly verified, within one hundred twenty (120) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which COMPANY shall settle, the physical and mailing addresses of COMPANY at the time and date the claim was presented and the physical and mailing addresses of COMPANY for the six (6) months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom COMPANY relies to establish its claim; and a failure to provide such written notification within the time and manner provided herein shall exonerate, excuse and except CITY from any liability whatsoever. CITY is under no obligation to provide notice to COMPANY that COMPANY's notice is insufficient. CITY reserves the right to request additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision to the contrary, COMPANY's failure to comply with the

requirements of this Section shall perpetually bar COMPANY's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if CITY has actual or constructive notice or knowledge of said claim or alleged damages. COMPANY agrees that the requirements of this entire Contract are reasonable. The provisions and obligations of this Section shall survive the termination of this Contract.

27. **Consideration:** The terms of this Contract are supported by good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties named herein.

28. **Termination At Will:** CITY may terminate this Contract at will for no or any reason upon giving at least one hundred eighty (180) days written notice to COMPANY. The parties to this Contract understand and agree that it is in CITY's sole discretion to cancel the Contract during the term of the Contract without penalty to CITY. COMPANY has no expectation and has received no guarantees that this Contract will not be terminated before the end of the Contract term. The parties have bargained for the flexibility of terminating this Contract upon tender of the requisite notice at any time during the term of the Contract. All work and services under the Contract shall be suspended upon termination of the Contract becoming effective.

29. **Compliance:** COMPANY agrees that it shall comply with Texas Government Code Section 2252.908, *et seq.*, as amended. COMPANY agrees that it shall comply with Texas Local Government Code Section 176.006, *et seq.*, as amended.

30. To the extent that Sections 2271.002 and 2274.002 of the Texas Government Code (collectively, the "Anti-Boycott Statutes") apply to this Contract, Company hereby verifies:

- that Company does not boycott Israel and will not boycott Israel during the term of this Contract;
- that Company does not boycott energy companies and will not boycott energy companies during the term of this Contract; and
- that Company does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of this Contract against a firearm entity or firearm trade association.

To the extent that the Anti-Boycott Statutes do not apply to this Contract, such verification is not required, and Company shall be deemed to have not made such verification.

31. **Records Retention and Production of Information.** To the extent that this Contract constitutes a contract described by Section 552.371 of the Texas Government Code, COMPANY shall: (i) preserve all contracting information related to this Contract as provided by the records retention requirements

applicable to CITY for the duration of this Contract; (ii) promptly provide to CITY any contracting information related to the Contract that is in the custody or possession of COMPANY on request of CITY; and (iii) on completion of the Contract, either: (a) provide at no cost to CITY all contracting information related to the Contract that is in the custody or possession of COMPANY; or (b) preserve the contracting information related to the Contract as provided by the records retention requirements applicable to CITY.

32. **Public Information.** To the extent that this Contract is a contract described by Section 552.371 of the Texas Government Code, COMPANY agrees as follows in accordance with Section 552.372(b) of the Texas Government Code: The requirements of Subchapter J, Chapter 552, Government Code, may apply to this Contract, and COMPANY agrees that the contract can be terminated if COMPANY knowingly or intentionally fails to comply with a requirement of that subchapter.

33. **Conflict of Terms.** If a conflict of terms or language exists between: (i) any of the provisions of this Contract and (ii) any of the provisions contained in any exhibit(s) attached to this Contract, precedence shall be given to the provisions of this Contract. For the avoidance of any doubt, the provisions contained in this Contract shall supersede any and all conflicting provisions contained in any exhibit(s) attached hereto. Furthermore, the parties acknowledge and agree that any provision contained in an exhibit(s) attached to this Contract that imposes an additional express or implied obligation on CITY is hereby made void and of no force or effect. CITY's sole and exclusive obligations under this Contract are contained in the provisions of this Contract that precede the signature page(s), which evidences the parties' execution.

34. Company agrees that all iron or steel products produced through a manufacturing process and used in the project that is the subject of this Contract shall be produced in the United States in accordance with Government Code § 2252.202, et seq., as amended.

EXECUTED IN DUPLICATE the day and year first above mentioned.

THE CITY OF MIDLAND, TEXAS

By: _____
Robert Patrick, City Manager

ATTEST

_____
Amy M. Turner, City Secretary

APPROVED ONLYAS TO FORM

_____
John Ohnemiller, City Attorney

COMPANY:

By: _____

Name: _____

Title: _____

STATE OF _____ §
§
COUNTY OF_____ §

BEFORE ME, the undersigned authority, on this ____ day of _____, 20____ personally appeared, _____, an officer of _____,known to me to be the person and official whose name is subscribed to the forgoing instrument, and acknowledged to me that he executed the same as the act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ____day of _____, 20____.

_____

Notary Public, State of _____

EXHIBIT C

Bonding Requirements

The successful bidder shall be required to furnish a Performance & Payment Bond* for bids in excess of $50,000.00, in an amount equal to one hundred percent (100%) of the total contract price, such bond to be executed in five (5) original counterparts by a Corporate Surety authorized to do business in the State of Texas and acceptable to the City of Midland. All bonds must be executed on forms contained in these contract documents. The form of agreement which the successful bidder, as contractor, will be required to execute is also included herewith. The form of agreement and the form of the bonds should be carefully examined by the bidder.

A certified check, cashier's check, bank money order, or irrevocable letter of credit issued by a bank satisfactory to the City, or a bidder's bond on the form provided, in the amount of five percent (5%) of the largest possible lump sum bid submitted, payable without recourse to the City, must accompany the bidder's proposal, as a guaranty that the bidder will enter a contract and execute the required payment bond and guaranty in the forms provided within fifteen (15) days after notice of award of contract to him. Bids or proposals without the required bid guaranty will not be considered. All bid sureties and payment bonds shall name the City of Midland as Obligee.

*A cash security such as a cashier's check or irrevocable letter of credit issued by a bank satisfactory to the City for 100 % of the contract amount may be supplied in lieu of the Performance and Payment Bonds. The check will be returned un-cashed upon satisfactory completion of the work and evidence of payment of all obligations due for the contract.

BID BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

SURETY NO. _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____

_____

_____

(hereinafter called the Principal), as Principal, and _____

_____

_____

(hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____

_____ DOLLARS

($_____), for the payment whereof the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid or Proposal to enter into a certain written Contract with the obligee to _____

_____.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREED that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection to such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either such events, shall be entitled and is hereby given the right to collect the full amount of this Bid Bond as liquidated damages.

PROVIDED, further that if any legal action be filed upon this Bond venue shall lie in Midland County, Texas

IN WITNESS THEREOF, THE SAID PRINCIPAL AND SURETY do sign and seal this instrument, this _____ day of _____, 20____.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____

APPROVED AS TO FORM:

_____

City Attorney

NOTE: ATTACH POWER OF ATTORNEY

PAYMENT BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND § SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ of the City of _____ of the County of _____ and State of Texas as Principal, and _____, as Surety, are held and firmly bound unto the City of Midland, Texas, as Obligee, in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and Surety bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____ day of _____, 20__, for the furnishing of materials, equipment to perform all labor and work necessary for _____, hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, the condition of the obligation is that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said contract, then this obligation shall be null and void; otherwise, it is to remain in full force and effect.

Surety, for value received, stipulates and agrees that no change, extension of time alteration or addition to the terms of the contract, or to the work performed there under, or the plans, specifications of drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of

time, alteration or addition to the terms of the contract, assignment thereof, or to the work to be performed there under.

IN WITNESS WHEREOF the said Principal and Surety have signed and sealed this instrument, this _____ day of _____, 20__ .

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____
City Attorney

NOTE: Attach Power of Attorney

Form Revised August 2012

PayB 2

PERFORMANCE BOND

THE STATE OF TEXAS §

COUNTY OF MIDLAND §

SURETY NO _____

KNOW ALL MEN BY THESE PRESENTS, THAT _____ (Hereinafter called the Principal[s]), as Principal(s), and _____ (Hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Midland, Texas a home rule municipal corporation of Midland County, Texas, (hereinafter called the Obligee), in the amount of _____ DOLLARS ($ _____) for the payment whereof the said Principal and surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____day of _____, 20___ , for the furnishing of materials and equipment to perform all labor and work necessary for the construction of _____, specifically including in the scope of this work and bond, the additional maintenance guaranty provisions set forth in the contract conditions, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copies at length herein, as well as the Principal's primary obligation to perform according to plans and specifications.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform the work in accordance with the plans, specifications, instructions to bidder, general and special conditions and other contract documents, including any addendum thereto, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Midland County, State of Texas.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to the work performed thereunder, or the plans, specifications or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in anywise affect its obligation on this Bond, and it does waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and surety do sign and seal this instrument, this _____ day of _____, 20___.

_____	_____
Principal	Surety
By _____	By _____
Address _____	Address _____
_____	_____
_____	_____

APPROVED AS TO FORM:

_____
City Attorney

NOTE: Attach Power of Attorney

Form Revised August 2012

PerfB 2

EXHIBIT D – BUILDING WAGE RATES rev 01-01-21

General Decision Number: TX20210261 01/01/2021

Superseded General Decision Number: TX20200261

State: Texas

Construction Type: Building

County: Midland County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021

BOIL0074-003 01/01/2017

	Rates	Fringes
BOILERMAKER	$ 28.00	22.35

ENGI0178-005 06/01/2020

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
(1) Tower Crane	$ 32.85	13.10
(2) Cranes with Pile Driving or Caisson Attachment and Hydraulic Crane 60 tons and above	$ 28.75	10.60
(3) Hydraulic cranes 59 Tons and under	$ 32.35	13.10

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* IRON0084-011 06/01/2020

	Rates	Fringes
IRONWORKER, ORNAMENTAL	$ 25.26	7.13

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* PLUM0404-001 09/01/2020

	Rates	Fringes
PLUMBER	$ 26.05	8.81

SUTX2014-037 07/21/2014

	Rates	Fringes
BRICKLAYER	$ 20.00	0.00
CARPENTER	$ 13.82	0.00
CEMENT MASON/CONCRETE FINISHER	$ 13.76	0.00
ELECTRICIAN	$ 23.18	6.31
INSULATOR - MECHANICAL (Duct, Pipe & Mechanical System Insulation)	$ 19.77	7.13
IRONWORKER, REINFORCING	$ 12.27	0.00

IRONWORKER, STRUCTURAL	$ 22.16	5.26
LABORER: Common or General	$ 11.80	0.00
LABORER: Mason Tender - Brick	$ 11.38	0.00
LABORER: Mason Tender - Cement/Concrete	$ 10.58	0.00
LABORER: Pipelayer	$ 12.49	2.13
LABORER: Roof Tearoff	$ 11.28	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	$ 14.25	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader	$ 13.93	0.00
OPERATOR: Bulldozer	$ 18.29	1.31
OPERATOR: Drill	$ 16.22	0.34
OPERATOR: Forklift	$ 14.83	0.00
OPERATOR: Grader/Blade	$ 13.37	0.00
OPERATOR: Loader	$ 13.55	0.94
OPERATOR: Mechanic	$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete)	$ 16.03	0.00
OPERATOR: Roller	$ 12.70	0.00
PAINTER (Brush, Roller, and Spray)	$ 15.00	0.73
PIPEFITTER	$ 25.80	8.55
ROOFER	$ 14.75	0.00
SHEET METAL WORKER (HVAC Duct Installation Only)	$ 22.73	7.52
SHEET METAL WORKER, Excludes HVAC Duct Installation	$ 19.50	0.00

TILE FINISHER	$ 11.22	0.00
TILE SETTER	$ 14.74	0.00
TRUCK DRIVER: Dump Truck	$ 12.39	1.18
TRUCK DRIVER: Flatbed Truck	$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck	$ 12.50	0.00
TRUCK DRIVER: Water Truck	$ 12.00	4.11

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses

(29CFR 5.5 (a) (1) (ii)).

EXHIBIT D – Heavy and Highway Wage Rates rev 01-01-21

"General Decision Number: TX20210002 01/01/2021

Superseded General Decision Number: TX20200002

State: Texas

Construction Types: Heavy and Highway

Counties: Armstrong, Carson, Crosby, Ector, Irion, Lubbock, Midland, Potter, Randall, Taylor and Tom Green Counties in Texas.

HEAVY & HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/gov contracts.

Modification Number	Publication Date
0	01/01/2021

* SUTX2011-002 08/02/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving & Structures)	$ 13.55	
ELECTRICIAN	$ 20.96	
FORM BUILDER/FORM SETTER		
Paving & Curb	$ 12.36	

Structures.....$ 13.52

LABORER
- Asphalt Raker.....$ 12.28
- Flagger.....$ 9.30
- Laborer, Common.....$ 10.30
- Laborer, Utility.....$ 11.80
- Work Zone Barricade Servicer.....$ 10.30

POWER EQUIPMENT OPERATOR:
- Asphalt Distributer.....$ 14.87
- Asphalt Paving Machine.....$ 13.40
- Broom and Sweeper.....$ 11.21
- Crane, Lattice Boom 80 Tons or Less.....$ 16.82
- Crawler Tractor Operator.....$ 13.96
- Excavator, 50,000 lbs or less.....$ 13.46
- Front End Loader Operator, Over 3 CY.....$ 12.77
- Front End Loader, 3CY or less.....$ 12.28
- Loader/Backhoe.....$ 14.18
- Mechanic.....$ 20.14
- Milling Machine.....$ 15.54
- Motor Grader, Rough.....$ 16.15
- Motor Grader, Fine.....$ 17.49
- Pavement Marking Machine.....$ 16.42
- Reclaimer/Pulverizer.....$ 12.85
- Roller, Asphalt.....$ 10.95
- Roller, Other.....$ 10.36
- Scraper.....$ 10.61
- Spreader Box.....$ 12.60

Servicer.....$ 13.98

Steel Worker (Reinforcing).....$ 13.50

TRUCK DRIVER
- Lowboy-Float.....$ 14.46
- Single Axle.....$ 12.74
- Single or Tandem Axle Dump.....$ 11.33
- Tandem Axle Tractor with Semi.....$ 12.49

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses

(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate

includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

SECTION 00 61 13.13 – PERFORMANCE BOND

CONTRACTOR (*Name/Address*):

SURETY (*Name/Address of Principal Place of Business*):

OWNER (*Name/Address*):
City of Midland
300 North Loraine
Midland Texas 79701

CONSTRUCTION CONTRACT
Effective Date of Agreement:
Amount:
Description (*Name and Location*):
Water System Improvements
Business 20 and San Andres Water Main Extension
Midland, Midland County, Texas

BOND
Bond Number:
Date (*Not earlier than Effective Date of Agreement of Construction Contract*):
Amount:
Modifications to this Bond Form: ☐ None. ☐ See Paragraph 16.

Surety and Contractor, intending legally bound, subject to terms set forth, do each cause this Performance Bond duly executed by authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____	_____
Contractor Name and Corporate Seal	Surety Name and Corporate Seal
(Seal)	(Seal)
By:	**By**:
_____	_____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest:	**Attest**:
_____	_____
Signature	Signature
_____	_____
Title	Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers.
(2) Any singular reference to Contractor, Surety, Owner, or other party, considered plural where applicable.

1. Contractor and Surety, jointly and severally, bind themselves, heirs, executors, administrators, successors, and assigns to Owner for performance of Contract, incorporated herein by reference.
2. If Contractor performs Construction Contract, Surety and Contractor have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
    3.1 Owner first provides notice to Contractor and Surety that Owner is considering declaring Contractor Default. Such notice shall indicate if Owner is requesting a conference among Owner, Contractor, and Surety to discuss Contractor's performance. If Owner does not request a conference, Surety may, within five business days after receipt of Owner's notice, request such a conference. If Surety timely requests a conference, Owner shall attend. Unless Owner agrees otherwise, any conference requested under this Paragraph 3.1, shall be held within 10 business days of Surety's receipt of Owner's notice. If Owner, Contractor, and Surety agree, Contractor is allowed a reasonable time to perform Construction Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default;
    3.2 Owner declares a Contractor Default, terminates Construction Contract, notifies Surety; and
    3.3 Owner agrees to pay the Balance of Contract Price in accordance with Construction Contract terms to Surety or contractor selected to perform Construction Contract.
4. Failure on Owner's part to comply with notice requirement in Paragraph 3.1, shall not constitute failure to comply with a condition precedent to Surety's obligations, or release Surety from obligations, except to extent Surety demonstrates actual prejudice.
5. When Owner satisfies conditions of Paragraph 3, Surety shall promptly, and at his own expense, take one of the following actions:
    5.1 Arrange for Contractor, with Owner's consent, to perform and complete Contract;
    5.2 Undertake to perform and complete Construction Contract through agents or independent contractors;
    5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of Construction Contract, arrange for contract to be prepared for execution by Owner and contractor selected with Owner concurrence, secured with performance and payment bonds executed by a qualified surety equivalent to bonds issued on Construction Contract, and pay Owner amount of damages as described in Paragraph 7 in excess of Balance of Contract Price incurred by Owner as a result of Contractor Default; or
    5.4 Waive right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
        5.4.1 After investigation, determine amount liable to Owner and, as soon as practicable after amount is determined, make payment to Owner; or
        5.4.2 Deny liability in whole or part and notify Owner, citing reason(s) for denial.
6. If Surety does not proceed as provided in Paragraph 5 with reasonable promptness, Surety is deemed in default on this Bond seven days after receipt of additional written notice from Owner to Surety demanding Surety perform obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 5.4 and Owner refuses payment or Surety denies liability, in whole or in part, without further notice,
7. If Surety elects to act under Paragraphs 5.1, 5.2, or 5.3, then responsibilities of Surety to Owner shall not be greater than those of Contractor under Construction Contract, and responsibilities of Owner to Surety not greater than those of Owner under Construction Contract. Subject to commitment by Owner to pay the Balance of Contract Price, Surety is obligated, without duplication for:
    7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
    7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
    7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If Surety elects to act under Paragraphs 5.1, 5.3, or 5.4, Surety's liability is limited to amount of this Bond.
9. Surety is not liable to Owner or others for obligations of Contractor unrelated to Construction Contract, and Balance of Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or heirs, executors, administrators, successors, and assigns.
10. Surety hereby waives notice of any change, including time changes, to Construction Contract or related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in location where Work or part of Work is located, and instituted within two years after declaration of Contractor Default, within two years after Contractor ceased working, or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If provisions of this paragraph are void or prohibited by law, minimum periods of limitations available to sureties as a defense in jurisdiction of suit is applicable.
12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to address shown on page where signature appears.
13. When this Bond is furnished to comply with statutory or other legal requirement in location where construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement deemed incorporated herein. When so furnished, intent is this Bond shall be construed as statutory bond and not a common law bond.
14. Definitions
    14.1 Balance of Contract Price: Total amount payable by Owner to Contractor under Construction Contract after all proper adjustments are made including allowance for Contractor for any amounts received or to be received by Owner in settlement of insurance or other claims for damages Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under Construction Contract.
    14.2 Construction Contract: Agreement between Owner and Contractor identified on cover page, including all Contract Documents and changes made to agreement and Contract Documents.
    14.3 Contractor Default: Failure of Contractor, not remedied or waived, to perform or otherwise comply with a material term of Construction Contract.
    14.4 Owner Default: Failure of Owner, not remedied or waived, to pay Contractor as required under Construction Contract or perform and complete or comply with other material terms of Construction Contract.
    14.5 Contract Documents: All documents that comprise agreement between Owner and Contractor.
15. If this Bond is issued for an agreement between contractor and subcontractor, "Contractor," in this Bond, is subcontractor and "Owner" is Contractor.
16. Modifications to this Bond are as follows:
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SECTION 00 61 13.16 - PAYMENT BOND

CONTRACTOR (*Name/Address*):

SURETY (*Name/Address of Principal Place of Business*):

OWNER (*Name/Address*):
City of Midland
300 North Loraine
Midland Texas 79701

CONSTRUCTION CONTRACT
Effective Date of Agreement:
Amount:
Description (*Name and Location*):
Water System Improvements
Business 20 and San Andres Water Main Extension
Midland, Midland County, Texas

BOND
Bond Number:
Date (*Not earlier than Effective Date of Agreement of Construction Contract*):
Amount:
Modifications to this Bond Form: ☐ None. ☐ See Paragraph 16.

Surety and Contractor, intending legally bound hereby, subject to terms set forth, do each cause this Payment Bond duly executed by authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____	_____
Contractor Name and Corporate Seal	Surety Name and Corporate Seal
(Seal)	(Seal)
By:	**By**:
_____	_____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest:	**Attest**:
_____	_____
Signature	Signature
_____	_____
Title	Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers.
(2) Any singular reference to Contractor, Surety, Owner, or other party, considered plural where applicable.

1. Contractor and Surety, jointly and severally, bind themselves, heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished for use in performance of Construction Contract, which is incorporated herein by reference, subject to these terms.

2. If Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in performance of Construction Contract, then Surety and Contractor have no obligation under this Bond.

3. If there is no Owner Default under Construction Contract, Surety's obligation to Owner under this Bond shall arise after Owner promptly notifies Contractor and Surety (at address described in Paragraph 13) of claims, demands, liens, or suits against Owner or Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in performance of Construction Contract, and tendered defense of such claims, demands, liens, or suits to Contractor and Surety.

4. When Owner satisfies conditions in Paragraph 3, Surety shall promptly and at Surety's expense, defend, indemnify, and hold harmless Owner against a duly tendered claim, demand, lien, or suit.

5. Surety's obligations to a Claimant under this Bond shall arise after:

5.1 Claimants without direct contract with Contractor,

5.1.1 have furnished written notice of non-payment to Contractor, stating with substantial accuracy, amount claimed and name of party to whom materials were, or equipment was, furnished or supplied or for whom labor was done or performed, within 90 days after last performing labor or last furnished materials or equipment included in Claim; and

5.1.2 sent a Claim to Surety (at address described in Paragraph 13).

5.2 Waive right to perform and complete, arrange for completion, or obtain new contractor, and with reasonable promptness under the circumstances:

6. If notice of non-payment required by Paragraph 5.1.1 is given by Owner to Contractor, sufficient to satisfy Claimant's obligation to furnish written notice of non-payment under Paragraph 5.1.1.

7. When Claimant satisfies conditions of Paragraphs 5.1 or 5.2, whichever is applicable, Surety shall promptly and at Surety's expense, take the following actions:

7.1 Send an answer to Claimant, with copy to Owner, within 60 days after receipt of Claim, stating amounts undisputed and basis for challenging any amounts disputed; and

7.2 Pay or arrange for payment of any undisputed amounts.

7.3 Surety's failure to discharge obligations under Paragraphs 7.1 or 7.2 not deemed to constitute a waiver of defenses, Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts Surety and Claimant reached agreement. If, however, Surety fails to discharge obligations under Paragraphs 7.1 or 7.2, Surety shall indemnify Claimant for reasonable attorney fees Claimant incurs thereafter to recover any sums found due and owing Claimant.

8. Surety's total obligation shall not exceed amount of this Bond, plus amount of reasonable attorney's fees provided under Paragraph 7.3, and amount of this Bond shall be credited for any payments made in good faith by Surety.

9. Amounts owed by Owner to Contractor under Construction Contract shall be used for performance of Construction Contract and to satisfy claims, if any, under any construction performance bond. By Contractor furnishing and Owner accepting this Bond, they agree all funds earned by Contractor in performance of Construction Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use funds for completion of Work.

10. Surety is not liable to Owner, Claimants, or others for obligations of Contractor unrelated to Construction Contract. Owner is not liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. Surety hereby waives notice of any change, including changes of time, to Construction Contract or related subcontracts, purchase orders, and other obligations.

12. No suit or action shall be commenced by Claimant under this Bond other than in a court of competent jurisdiction in state where Project subject of Construction Contract is located or after expiration of one year from date (1) when Claimant sent a Claim to Surety pursuant to Paragraphs 5.1.2 or 5.2, or (2) when last labor or service was performed by anyone or last materials or equipment were furnished by anyone under Construction Contract, whichever of (1) or (2) first occurs. If provisions of this paragraph are void or prohibited by law, minimum period of limitation available to sureties as defense in jurisdiction of suit, shall be applicable.

13. Notice and Claims to Surety, Owner, or Contractor shall be mailed or delivered to address shown on page where signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of date received.

14. When this Bond is furnished to comply with statutory or other legal requirement in location where construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement is deemed deleted therefrom and provisions conforming to such statutory or other legal requirement deemed incorporated herein. When so furnished, intent is Bond shall be construed as statutory bond and not as common law bond.

15. Upon requests by any person or entity appearing a potential beneficiary of this Bond, t Contractor and Owner shall promptly furnish a copy of this Bond or permit copy to be made.

16. Definitions

16.1 Claim: Written statement by Claimant including:

16.1.1 Name of the Claimant;

16.1.2. Name of person for whom labor was done, or materials or equipment furnished;

16.1.3. Copy of agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in performance of Construction Contract;

16.1.4. Brief description of labor, materials, or equipment furnished;

16.1.5. Date when Claimant last performed labor or last furnished materials or equipment for use in performance of Construction Contract;

16.1.6. Total amount earned by Claimant for labor, materials, or equipment furnished as of date of Claim;

16.1.7. Total amount of previous payments received by Claimant; and

16.1.8. Total amount due and unpaid to Claimant for labor, materials, or equipment furnished as of date of Claim.

16.2 Claimant: Individual or entity with direct Contractor contract or with subcontractor of Contractor to furnish labor, materials, or equipment for use in performance of Construction Contract. "Claimant" also includes any individual or entity who rightfully asserted a claim under an applicable mechanic's lien or similar statute against real property where Project is located. Intent of this Bond is to include without limitation in terms of "labor, materials, or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in Construction Contract, architectural and engineering services required for performance of Work of Contractor and Contractor's subcontractors, and all other items that a mechanic's lien may be asserted in jurisdiction where labor, materials, or equipment was furnished.

16.3 Construction Contract: Agreement between Owner and Contractor identified on cover page, including all Contract Documents and changes made to agreement and Contract Documents.

16.4 Owner Default: Failure of Owner, not remedied or waived, to pay Contractor as required under Construction Contract or perform and complete or comply with other material terms of e Construction Contract.

16.5 Contract Documents: All documents that comprise agreement between Owner and Contractor.

17. If this Bond is issued for agreement between Contractor and subcontractor, "Contractor," in this Bond, is subcontractor and "Owner" is Contractor.

18. Modifications to this Bond are as follows:

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SECTION 01 10 00 – SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:
   1. Work covered by Contract Documents.
   2. Contractor use of site and premises.
   3. Work sequence.
   4. Owner occupancy.
   5. Permits.

B. Related Requirements:
   1. Section 00 52 20 “Contract for Consideration.”
   2. Other Division 01 Specification Sections apply to Work of this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Identification: Water System Improvements, Business 20 and San Andres Water Main Extension.
B. Location: Midland, Midland County, Texas.
C. Owner: City of Midland, Texas
D. Work consists of approximately 3,000 linear feet of new 12-inch buried water main and associated appurtenances.

1.3 CONTRACTOR USE OF SITE AND PREMISES

A. Limit use of site and premises to allow:
   1. Owner occupancy.
   2. Work by others and Owner.
   3. Public access.

B. Construction operations: Limited to areas as noted on Drawings.
C. Time restrictions for performing Work as specified in Section 00 52 20 “Contract for Consideration.”
D. Utility outages and shutdowns.
   1. Coordinate and schedule utility outages/shutdown.
   2. Allowed only at previously-agreed-upon times.
   3. Schedule at least one week before outage/shutdown.
   4. Submit outage/shutdown request to Engineer itemizing dates, times, and durations of early requested outage/shutdown.

1.4 WORK SEQUENCE

A. Construct Work in phases to accommodate Owner requirements during construction.

1.5 OWNER OCCUPANCY

A. Owner will occupy premises during construction to conduct normal operations.
B. Cooperate with Owner to minimize conflict and facilitate Owner operations.

1.6 PERMITS

A. Furnish all necessary permits for construction of Work including:
   1. Stormwater Pollution Prevention Plan.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 20 00 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Application for Payment.
   2. Change Procedures.
   3. Unit prices.
   4. Alternates.

B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 APPLICATIONS FOR PAYMENT

A. Submit application on Contractor's standard form, approved by Engineer.
B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
C. Payment Period: As defined in Owner-Contractor agreement.
D. Complete Application for Payment includes Construction progress schedule, and submittal schedule, all required to process Application for Payment.

1.3 CHANGE PROCEDURES

A. Submittals: Submit name of person authorized to receive change documents and responsible for informing others in Contractor's employ or subcontractors of changes to Work.
B. Carefully study and compare Contract Documents before proceeding with fabricating and installing Work. Promptly advise Engineer of any error, inconsistency, omission, or apparent discrepancy.
C. Requests for Information (RFI) and Clarifications: Allot time in construction scheduling for liaison with Engineer. Establish procedures for handling queries and clarifications.
   1. Use Newforma for requesting information.
   2. Engineer may respond with a direct answer on RFI form through Newforma.
D. Engineer will advise of minor changes in the Work not involving adjustment to Contract Price or Time by issuing supplemental instructions through Newforma.
E. Engineer may issue a change order through Newforma including a detailed description of proposed change with supplementary or revised Drawings and Specifications for executing change. Contractor will prepare and submit proposed change in Contractor Price and/or Time within seven days.
F. Document requested substitutions per Section 01 25 00 "Substitution Procedures."
G. Stipulated Price Change Order: Based on Engineer-provided change order form and Contractor's fixed price quotation as recommended by Engineer and accepted by Owner and Contractor.
H. Unit Price Change Order: For Contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units not predetermined, execute Work under Engineer-provided Change Order form, as recommended by Engineer and accepted by Owner and Contractor.
I. Work Directive Change: Engineer may issue directive on Engineer-provided work change order form signed by Owner, instructing Contractor to proceed with change in Work, for subsequent

inclusion in Change Order. Document will describe changes in Work and designate method of determining any change in Contract Price or Time. Promptly execute change.

J. Document each quotation for change in Project Cost or Time with sufficient data to allow evaluation of quotation.

K. Change Order Forms: Engineer provided.

L. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.

M. Correlation of Contractor Submittals:

1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Price.
2. Promptly revise Progress Schedules to reflect change in Contract Time, revise sub-schedules to adjust times, for other items of Work affected by change, and resubmit.
3. Promptly enter changes in Record Documents.

1.4 UNIT PRICES

A. Authority: Measurement methods delineated in individual Specifications.

B. Take measurements and compute quantities. Engineer to verify.

C. Unit Quantities: Quantities and measurements indicated in Bid Form are for Contract purposes only. Quantities and measurements supplied or placed in Work determine payment. When actual Work requires more or fewer quantities than those indicated, provide required quantities at contracted unit prices.

D. Payment Includes:

1. Full compensation for required labor, products, tools, equipment, plant, transportation, services, and incidentals.
2. Erection, application, or installation of Work item.
3. Overhead and profit.

E. Final payment for Work governed by unit prices will be made based on actual measurements and quantities accepted by Engineer multiplied by unit price for Work incorporated in or made necessary by Work.

1.5 ALTERNATES

A. Owner will review and accept/reject Alternates quoted on Bid Form. Accepted Alternates are identified in Owner-Contractor Agreement as accepted.

B. Coordinate related Work and modify surrounding Work as required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 22 00 – MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Procedures for measurement and payment.
   2. Mobilization demobilization.
   3. Unit price items.
   4. Lump sum items.
   5. Bid Form-specific payment items.

B. Related Requirements:
   1. Section 00 41 00 “Bid Form.”
   2. Other Division 01 Specification Sections apply to Work of the Section.

1.2 PROCEDURES FOR MEASUREMENT AND PAYMENT

A. Unit price bid on each item as stated in Section 00 41 00 “Bid Form” includes furnishing all labor, superintendence, machinery, equipment, and materials, except as otherwise specified, necessary, or incidental to complete various item of Work per Drawings and Specifications.

B. Cost of Work or materials shown on Drawings or called for in Specifications and on which no separate payment is made, included in bid prices on various pay items.

C. Payment not made for any items not complete, including all associated incidental Work.

1.3 MOBILIZATION/DEMOBILIZATION

A. Payment made for mobilization and demobilization on lump sum basis.

B. Bid amount for mobilization and demobilization shall not exceed 5 percent of total Bid Price.

C. Work under this item consists of preparatory work and operations, including but not limited to those necessary for movement of personnel, equipment, supplies, and incidentals to Work; establish all offices, buildings, and other facilities necessary for Work; and all other work and operations performed or costs incurred prior to beginning work on various items of Work.

D. Payment for mobilization and demobilization will be on a lump sum basis with partial payments as noted. The adjusted Contract Amount as used herein is defined as the total Contract amount less lump sum for mobilization and demobilization.
   1. First Application for Payment: 50 percent of lump sum.
   2. Second Application for Payment: 75 percent of the lump sum.
   3. When 10 percent of adjusted Contract amount is earned, 90 percent of mobilization and demobilization lump sum.
   4. Final Application for Payment: 100 percent of mobilization and demobilization lump sum.

1.4 UNIT PRICE ITEMS

A. Unit price items, not otherwise included herein, paid at a unit price per unit.

B. Payment will include all work and material for installing unit price item as specified.

C. Measurement made in units shown on Section 00 41 00 “Bid Form.”

1.5 LUMP SUM ITEMS

A. Lump sum items include all work and materials for installing lump sum item as specified.
B. Payment based on percentage complete basis as agreed by Engineer and Contractor.
C. Payment includes all work and material for installing lump sum bid item as specified.

1.6 BID FORM-SPECIFIC PAYMENT ITEMS

A. Water
    1. Water Main
        a. Measurement: Linear foot basis as measured along center line of installed pipe, measured center-of-fitting to center-of-fitting or end-of-pipe without any deduction for length of intermediate fittings or valves. Based on defined limits as specified on Drawings and Specifications.
        b. Payment: For each type and size specified, shown on Drawings and included in Bid Form, per unit price for excavation, foundation, bedding, backfill, compaction, restraining, testing, furnishing, and installing pipe at depths specified, and all other incidental work required for complete installation.
    2. Warning Tape and Tracer Wire
        a. Measurement: Linear foot basis as measured along center line of installed tape.
        b. Payment: For each type specified, shown on Drawings, and included in Bid Form, per unit price for furnishing and installing at depths specified, and all other incidental work required for complete installation.
    3. Remove Ductile Iron Fittings
        a. Measurement: None.
        b. Payment: Lump sum basis for removing ductile iron fittings as shown on Drawings, for excavating, removing, and all other incidental work required for complete installation.
    4. Ductile Iron Fittings
        a. Measurement: Per ton basis measured as specified by manufacturer, as listed in AWWA C153 and as defined by locations shown on Drawings and Specifications.
        b. Payment: For each type specified, shown on Drawings, per unit price for excavation, foundation, bedding, backfill, compaction, furnishing, and installing restraint method(s), furnishing and installing fitting at depths necessary, and all other incidental work required for complete installation.
    5. Steel Casing
        a. Measurement: Linear foot basis as measured along center line of casing installed, measured from end-to-end of casing installed. Based on defined limits as specified on Drawings and Specifications.
        b. Payment: For each type specified, shown on Drawings and included in Bid Form, per unit price for excavation, foundation, bedding, backfill, compaction, welding, furnishing and installing spacers and end seals, furnishing and installing vents, bore pits, furnishing and installing casing at depths shown, and all other incidental work required for complete installation.
    6. Tapping Sleeves, Tapping Gate Valves, and Boxes
        a. Measurement: Each basis as defined by locations shown on Drawings and Specifications.
        b. Payment: For each type and size specified on Drawings and included in Bid Form, per each for excavation, foundation, bedding, backfill, compaction, furnishing, and installing restraint method(s), furnishing and installing tapping

sleeve, gate valve, valve box, and concrete collar, and all other incidental work required for complete installation.

7. Gate Valves and Boxes
    a. Measurement: Each basis as defined by locations shown on Drawings and Specifications.
    b. Payment: For each type and size specified, shown on Drawings, and included in Bid Form, per each for excavation, foundation, bedding, backfill, compaction, furnishing and installing gate valve, furnishing and installing valve box, furnishing and installing concrete collar, and all other incidental work required for complete installation.
8. Water Main Cap
    a. Measurement: Each basis as defined by locations shown on Drawings and Specifications.
    b. Payment: For each type and size specified, shown on Drawings and included in Bid Form, per each for excavation, foundation, bedding, backfill, compaction, removal, disposal, furnishing and installing restraint method(s), furnishing and installing cap, and all other incidental work required for complete installation.
9. Fire Hydrants
    a. Measurement: Each basis as defined by locations shown on Drawings and Specifications.
    b. Payment: For each type and size specified on Drawings and included in Bid Form, per each for excavation, foundation, bedding, backfill, compaction, furnishing, and installing restraint method(s), furnishing and installing fire hydrant and all necessary components, and all other incidental work required for complete installation.
10. Air Valve and Vault
    a. Measurement: Each basis as defined by locations shown on Drawings and Specifications.
    b. Payment: For each type and size specified, shown on Drawings and included in Bid Form, per each for excavation, foundation, bedding, backfill, compaction, furnishing and installing air valve, furnishing and installing vault with lid, furnishing and installing surface improvements, and all other incidental work required for complete installation.
11. Connection to Existing Water Main
    a. Measurement: Each basis as defined by locations shown on Drawings and Specifications.
    b. Payment: For each type and size specified, as shown on Drawings, and included in Bid Form, per each for connection to existing water main and all other incidental work required for complete installation.

B. General/Site
1. Asphalt Pavement Removal and Replacement
    a. Measurement: Square yard basis of measured finished area based on defined limits as specified on Drawings and Specifications.
    b. Payment: For each type specified, shown on Drawings, and included in Bid Form, per unit price for cutting, removing, disposing, furnishing, and installing base and subgrade, as well as furnishing and installing pavement and other incidental work. No payment for work outside maximum pavement limits indicated on Drawings and Specifications or pavement removed for Contractor convenience.

2. Concrete Pavement Removal and Replacement
    a. Measurement: Square yard basis of measured finished area based on defined limits as specified on Drawings and Specifications.
    b. Payment: For each type specified, shown on Drawings and included in Bid Form, per unit price for cutting, removing, disposing, furnishing and installing base and subgrade, and furnishing and installing pavement and other incidental work. No payment for work outside maximum pavement limits indicated on Drawings and Specifications, or pavement removed for Contractor convenience.
3. Concrete Rip Rap Removal and Replacement
    a. Measurement: Square yard basis of measured finished area based on defined limits as specified on Drawings and Specifications.
    b. Payment: For each type specified, shown on Drawings, and included in Bid Form, per unit price for cutting, removing, disposing, furnishing, and installing base and subgrade, as well as furnishing and installing rip rap and other incidental work. No payment for work outside maximum rip rap limits indicated on Drawings and Specifications or rip rap removed for Contractor convenience.
4. Concrete Curb and Gutter Removal and Replacement
    a. Measurement: Linear foot basis measured along the ground of removed and replaced curb and gutter based on define limits as specified on Drawings and Specifications.
    b. Payment: For each type specified, shown on Drawings, and included in Bid Form, per unit price for cutting, removing, disposing, furnishing, and installing base and subgrade, as well as furnishing and installing curb and gutter and other incidental work. No payment for work outside maximum curb and gutter limit indicated on Drawings and Specifications, or curb and gutter removed for Contractor convenience.
5. Tree Removal
    a. Measurement: Each basis as defined by locations shown on Drawings.
    b. Payment: For each shown on Drawings and included in Bid Form, per each for removing, disposing, excavation, backfill, compaction, furnishing, and installing base and subgrade, furnishing and installing surface improvement to match adjoining area, and all other incidental work required for completion.
6. Flood Gauge Removal and Replacement
    a. Measurement: Each basis as defined by locations shown on Drawings.
    b. Payment: For each shown on Drawings and included in Bid Form, per each for removing, disposing, excavation, backfill, compaction, furnishing, and installing proposed flood gauge as indicated on Drawings, furnishing and installing surface improvement to match adjoining area, and all other incidental work required for a complete installation.
7. Traffic Control
    a. Measurement: None.
    b. Payment: Lump sum basis for preparing, furnishing, implementing, and maintaining an approved traffic control plan as specified.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Quality assurance.
   2. Product options.
   3. Product substitution procedures.

B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 QUALITY ASSURANCE

A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.

B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.

C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless Owner accepts substitution and approves in writing.

1.3 PRODUCT OPTIONS

A. See Section 01 60 00 “Product Requirements.”

1.4 PRODUCT SUBSTITUTION PROCEDURES

A. Engineer will consider requests for substitutions only within 30 days after date established in Notice to Proceed.

B. Substitutions may be considered when product becomes unavailable through no fault of Contractor.

C. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:
   1. Manufacturer name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
   2. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
   3. Reference to Article numbers in Specifications.
   4. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
   5. Changes required in other Work.
   6. Availability of maintenance service and source of replacement parts, as applicable.
   7. Certified test data to show compliance with performance characteristics specified.
   8. Samples when applicable or requested.
   9. Other information as necessary to assist Engineer's evaluation.

D. A request constitutes a representation Contractor:
   1. Investigated proposed product and determined it meets/exceeds quality level of specified product.
   2. Will provide same warranty for substitution as specified product.

3. Will coordinate installation and make changes to other Work required for Work to complete with no additional cost to Owner.

4. Waives claims for additional costs/time extension that subsequently become apparent.
5. Will coordinate installation of accepted substitute, making required changes for Work to complete in all respects.
6. Will reimburse Owner for review/redesign services associated with reapproval by authorities having jurisdiction.

E. Substitutions not considered when indicated/implied on Shop Drawing or Product Data submittals without separate written request or acceptance requires revision to Contract Documents.

F. Substitution Submittal Procedure:
1. Submit requests for substitutions on Contractor-standard or Engineer-provided form.
2. Submit electronic files to Project website of Request for Substitution for consideration. Limit each request to one proposed substitution.
3. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on Contractor.
4. Engineer will notify Contractor in writing of decision to accept/reject request.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Project Information Management.
   2. Coordination.
   3. Preconstruction meeting.
   4. Request for information.
   5. Progress meetings.

B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 PROJECT INFORMATION MANAGEMENT

A. Project Website:
   1. Use Newforma Info Exchange at https://projects.team-psc.com/UserWeb/Login to send and receive Project information.
   2. Contact Engineer to set up username and password information.
   3. If Project is not listed when logged in, contact Engineer to add Project to your account.

B. Project information includes, but is not limited to:
   1. Product Submittals.
   2. Requests for Information (RFI).
   3. Applications for Payment.
   4. Schedules.
   5. Construction Change Requests (CCRs).
   6. Close-out Documents.
   7. Construction Document Files.

1.3 COORDINATION

A. Coordinate scheduling, submittals, and Work to assure efficient and orderly sequence of installation of construction elements.

B. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion.

C. After Owner occupancy of premises, coordinate access to site with Owner for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.4 PRECONSTRUCTION MEETING

A. Attendance Required:
   1. Owner.
   2. Engineer.
   3. Contractor.
   4. Major subcontractors.
   5. Testing companies.

B. Agenda:
   1. Distribute Contract Documents.
   2. Submit lists of subcontractors and products, Schedule of Values, submittal schedule, and progress schedule.
   3. Designate personnel representing each party in Contract and Engineer.
   4. Procedures and processing field decisions, submittals, substitutions, Applications for Payments, proposal request, Change Orders, Request for Information (RFI), and Contract closeout procedures.
   5. Review Notice to Proceed and Substantial/Final Completion Dates.
   6. Workmen's identification and background checks.
   7. Stormwater Pollution and Prevention Plan (SWPPP), if necessary.
   8. Scheduling:
      a. Use of premises by Owner and Contractor.
      b. Owner's requirements.
      c. Construction facilities and controls provided by Owner.
      d. Temporary utilities provided by Owner.
      e. Security and housekeeping procedures.
      f. Construction progress meetings.
      g. Procedures for testing.
      h. Procedures for maintaining record documents.
      i. Requirements for start-up of equipment.
      j. Inspection and acceptance of equipment put into service during construction.
   9. Scheduling activities of Construction Material Testing lab.

C. If necessary, Engineer shall record minutes and distribute copies to participants.

1.5 REQUEST FOR INFORMATION (RFI)

A. RFI requests from subcontractors or material suppliers will not be considered.

B. Information indicated on RFI shall be complete before submission. If Engineer determines request can be answered with information provided, Engineer will assign RFI tracking number. If Engineer determines request is not an RFI, request will be returned to Contractor electronically and deleted from Engineer's electronic tracking software without assigning an RFI tracking number. A transmittal document returning denied RFI request will be provided with a response indicating action to be taken by Contractor.

C. RFIs may contain more than one item when items are related. Otherwise, only one item shall be addressed on each RFI request.

D. Allow seven days for Engineer's response to each RFI.

E. Response to RFI will be issued to Contractor and Owner per Section 01 33 00 "Submittal Procedures."

F. Responses from Engineer are not changes unless, issued with a change per Section 01 20 00 "Price and Payment Procedure."

1.6 PROGRESS MEETINGS

A. Schedule and administer as necessary meetings throughout Work progress, at minimum.

B. Arrange meetings, prepare agenda with copies for participants, preside at meetings.

C. Attendance Required:
   1. Owner.
   2. Job superintendent.
   3. Major subcontractors.
   4. Suppliers.

5. Engineer.
6. As appropriate to agenda topics for each meeting.

D. Agenda:
1. Review minutes of previous meetings.
2. Review Work progress.
3. Field observations, problems, and decisions.
4. Identify problems which impede planned progress.
5. Review submittal schedule and status of submittals.
6. Review off-site fabrication and delivery schedules.
7. Maintenance of progress schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding Work period.
10. Coordinate projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on progress schedule and coordination.
13. Testing.
14. Other business relating to Work.

E. Record minutes and distribute copies within five days to Engineer, participants, and those affected by decisions made.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 32 16 - CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Submittals.
   2. Gantt chart schedules.
   3. Review and evaluation.
   4. Updating schedules.
   5. Distribution.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SUBMITTALS

A. Post as electronic file to Project website.

B. Submit initial progress schedule for Engineer review within 15 days after established Notice to Proceed date.

C. Schedule Updates:
   1. Submit with each Application for Payment.
   2. Projected and actual percent of completion.
   3. Completion progress by listed activity and subactivity, to within five working days prior to submittal.
   4. Changes in Work scope and activities modified since submittal.
   5. Delays in submittals or resubmittals, deliveries, or Work.
   6. Adjusted or modified sequences of Work.
   7. Other identifiable changes.
   8. Revised projections of progress and completion.

D. Narrative Progress Report:
   1. Submit with each Application for Payment.
   2. Summary of Work completed during past period between reports.
   3. Work planned during next period.
   4. Explanation of differences between summary of Work completed and Work planned in previously submitted report.
   5. Current and anticipated delaying factors and estimated impact on other activities and completion milestones.
   6. Corrective action taken or proposed.

1.3 GANTT CHART SCHEDULES

A. Format Gant chart Schedule, to include at least:
   1. Identification and listing, in chronological order, activities reasonably required to complete Work, including:
      a. Subcontract Work.
      b. Major equipment design, fabrication, factory testing, and delivery dates including required lead times.
      c. Move-in and other preliminary activities.

d. Equipment and equipment system test and startup activities.
e. Project closeout and cleanup.
f. Work sequences, constraints, and milestones.

2. Listings identified by Specification Section number.
3. Identification of:
   a. Horizontal time frame by year, month, and week.
   b. Duration, early start, and completion for each activity and subactivity.
   c. Critical activities and Project float.
   d. Sub-schedules to further define critical portions of Work.

1.4 REVIEW AND EVALUATION

A. Participate in joint review and evaluation of schedules with Engineer at each Progress Meeting or Application for Payment submittals.
B. Evaluate Project status to determine Work behind and ahead of schedule.
C. After review, revise schedules incorporating results of review, and resubmit within 10 days.

1.5 UPDATING SCHEDULES

A. Maintain schedules to record actual start and finish dates of completed activities.
B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update schedules to depict current status of Work.
C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
D. Upon approval of Change Order, include change in next schedule submittal.
E. Indicate changes required to maintain Date of Substantial Completion.
F. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and effect.

1.6 DISTRIBUTION

A. Following joint review, distribute copies to subcontractors, suppliers, Engineer, Owner, and other concerned parties.
B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Submittal procedures.
   2. Resubmittal requirements.
   3. Proposed products list.
   4. Shop Drawings.
   5. Product data.
   6. Test reports.
   7. Certificates.
   8. Manufacturers' instructions.
   9. Manufacturer’s Field Reports.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SUBMITTAL PROCEDURES

A. Submit to Engineer for review to check for conformance with information given and design concept expressed in Contract Documents.

B. Produce copies and distribute in accordance with this Article.

C. Use Project website to submit record documents as described in Section 01 70 00 "Execution and Closeout Requirements."

D. Transmit each submittal separately with Contractor's standard transmittal letter including Contractor's name, address, and phone number. Each submittal shall contain only one Specification Section.

E. Sequentially number transmittal forms using Section number or Contractor’s other sequential numbering system.

F. Identify Project, Contractor, subcontractor, or supplier, pertinent Drawing sheet and detail number(s), and Specification Section number appropriate to submittal.

G. Apply Contractor's stamp, signed or initialed certifying review, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is per requirements of Work and Contract Documents.

H. Schedule submittals to expedite Project and deliver to Engineer. Coordinate submission of related items.

I. For each submittal for review, allow 10 working days excluding delivery time to and from Contractor.

J. Identify variations from Contract Documents and product or system limitations detrimental to successful performance of completed Work. Information, comments, field verifications, responses, or other notations marked on submittals by Contractor shall be in blue or green colors only.

K. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

L. Unrequested Submittals will not be recognized or processed.

M. Format:
   1. Submit all submittals digitally using PDF file extension. Each submittal shall be a single PDF file including transmittal letter. Multiple files for same submittal will not be accepted.
   2. Submittals in any other format, including ZIP files, will be rejected.
   3. Hard copies will not be accepted.
   4. To ensure each page is legible, PDF pages of Drawings shall be same size/scale as hard copy. Where applicable, provide scale symbols to indicate scale. Illegible submittals will be rejected.
   5. Upload submittals to Project website.

N. Submittal procedures described herein apply to construction progress schedule, products list, shop Drawings, product data, samples (actual samples and digital files of same), design data, test reports, certificates, manufacturer's instructions and field reports, erection Drawings, RFIs, and other submittals submitted to Engineer.

1.3 RESUBMITTAL REQUIREMENTS

A. Revise submittals as required and resubmit to meet requirements specified and noted on submittal reviews.
B. Mark as *Resubmittal*.
C. Reuse original transmittal number and supplement with sequential alphabetical or numeric suffix for each resubmittal.

1.4 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 REQUIREMENTS FOR COMPLETE SHOP DRAWINGS

A. Printable Image Size: Minimum 8 1/2 by 11 inches, maximum 22 by 34 inches.
B. Draw details to a noted scale.
C. Draw site plans to same scale indicated on Contract Drawings.
D. Engineer-issued Construction Documents (electronic or paper format) cannot be used in any shape, form, or fashion in creating and developing Shop Drawings, except electronic files containing floor, site plans, or layout plans purchased from Engineer may be used as backgrounds for Contractor, subcontractors, sub-subcontractors, and material suppliers in Shop Drawing process.
E. Electronic Files: Available upon request. See Project Manager.
   1. Electronic AutoCAD drawing files are available for purchase from Engineer upon request. Cost of files plus applicable taxes are:
      a. 1 - 3 sheets: $100.00 per sheet.
      b. 4 - 6 sheets: $400.00 flat fee.
      c. 7 - 9 sheets: $500.00 flat fee.
   2. Contractor, subcontractors, and/or sub-subcontractors may purchase electronic file. Electronic file will be provided in software release currently used by Engineer. File provided via Project website.

3. Before file delivery, purchaser shall sign an Electronic File Transfer Release Form. Payment for an electronic file shall occur upon delivery of file to purchaser.
4. Only use electronic file for production of information required by Project and not any other form (in whole or part).
5. In creation and publication of Shop Drawings, under no circumstances shall Engineer's seal or title block of drawing be reproduced. Shop drawings must be original works from Contractor subcontractors, sub-subcontractors, and material suppliers.

1.6 PRODUCT DATA

A. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to Project.
B. Include recommendations for application and use, and reference to compliance with specified standards of trade associations and testing agencies.
C. After review, distribute per Article 1.2 “Submittal Procedures,” and provide copies for Record Documents described in Section 01 70 00 "Execution and Closeout Requirements."

1.7 TEST REPORTS

A. Submit for Engineer’s knowledge as Contract Administrator or Owner.
B. Submit test reports for information to assess conformance with information given and design concept expressed in Contract Documents.

1.8 CERTIFICATES

A. When specified in individual Specifications, submit certification by manufacturer, installation/application subcontractor, or Contractor, to Engineer.
B. Indicate material or product conforms to/exceeds specified requirements. Submit supporting reference data, affidavits, and certifications, as appropriate.
C. Certificates may be recent or previous test results on material, or product, but must be acceptable to Engineer.

1.9 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual Specifications, submit manufacturer-printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing.
B. Identify conflicts between manufacturers' instructions and Contract Documents.
C. Indicate special procedures, conditions requiring special attention and special environmental criteria required for application or installation.

1.10 MANUFACTURER'S FIELD REPORTS

A. Submit reports for Engineer's benefit as contract administrator or for Owner.
B. Submit report within 30 days of observation to Engineer for information.
C. Submit for information to assess conformance with information given and design concept expressed in Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Quality control.
   2. Tolerances.
   3. References.
   4. Testing and inspection services.
   5. Manufacturers' field services.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 QUALITY CONTROL

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturer’s instructions. If manufacturer’s instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Perform Work using persons qualified to produce required and specified quality.

D. Products, materials, and equipment may be subject to inspection by Engineer at place of manufacture or fabrication. Such inspections shall not relieve Contractor of complying with requirements of Contract Documents.

E. Supervise performance of Work to ensure Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or required by applicable codes.

B. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.

C. Obtain copies of standards and maintain onsite when required by product Specifications.

D. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

E. Neither contractual relationships, duties, or responsibilities of parties in Contract, nor those of Engineer shall be altered from Contract Documents by mention or inference in reference documents.

1.5 TESTING AND INSPECTION SERVICES

A. Owner will employ and pay for specified services of an independent firm to perform testing and inspection.
B. Independent firm will perform tests, inspections, and other services specified in individual Specifications and as required by Engineer.
C. Testing, inspections, and source quality control may occur on or off Project site. Perform off-site testing as required by Engineer.
D. Submit reports to Engineer, indicating observations and results of tests and compliance or noncompliance with Contract Documents.
E. Cooperate with independent firm. Furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor, as requested.
    1. Notify Engineer and independent firm 24 hours before expected time for operations requiring services.
    2. Pay for additional Samples and tests required for Contractor use.
F. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work per requirements of Contract Documents.
G. Retesting or Re-inspection Required Because of Nonconformance with Specified or Indicated Requirements: Payment for retesting or re-inspection shall be at sole expense of Contractor.
H. Independent Firm Responsibilities:
    1. Test Samples of mixes submitted by Contractor.
    2. Provide qualified personnel at Site. Cooperate with Engineer and Contractor in performance of services.
    3. Perform indicated sampling and testing of products per specified standards.
    4. Ascertain compliance of materials and mixes with Contract Document requirements.
    5. Promptly notify Engineer and Contractor of observed irregularities or nonconformance of Work or products.
    6. Perform additional tests required by Engineer.
    7. Attend preconstruction and progress meetings.
I. Independent Firm Reports. After each test, promptly submit report to Engineer and Contractor and provide interpretation of test results. Include:
    1. Date issued.
    2. Project title and number.
    3. Name of inspector.
    4. Date and time of sampling or inspection.
    5. Identification of product and Specifications.
    6. Location in Project.
    7. Type of inspection or test.
    8. Date of test.
    9. Results of tests.
    10. Conformance with Contract Documents.

1.6 MANUFACTURER'S FIELD SERVICES

A. When specified in individual Specifications, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, testing, adjusting, and balancing equipment, commissioning, as applicable, and initiate instructions when necessary.
B. Submit qualifications of observer to Engineer 30 days before required observations. Observer is subject to Engineer approval.
C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
D. Refer to Section 01 33 00 “Submittal Procedures,” Article 1.11 - Manufacturer's Field Reports.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Construction Facilities:
      a. Vehicular access.
      b. Parking.
      c. Progress cleaning.
      d. Traffic regulation.
   2. Temporary Controls:
      a. Barriers.
      b. Fencing.
      c. Security.
      d. Water control.
      e. Dust control.
      f. Erosion and sediment control.
      g. Pollution control.
      h. Protect Work.
   3. Remove utilities, facilities, and controls.

B. Related Requirements:
   1. Other Divisions 01 Specification Sections apply to Work of this Section.

1.2 VEHICULAR ACCESS

A. Construct temporary access roads from public thoroughfares to serve construction area, width, and load-bearing capacity to accommodate unimpeded traffic for construction purposes.
B. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
C. Extend and relocate vehicular access as Work progress requires, providing necessary detours for unimpeded traffic flow.
D. Location as approved by Engineer.
E. Provide unimpeded access for emergency vehicles. Maintain 20-foot-wide driveways with turning space between and around combustible materials.
F. Provide and maintain access to fire hydrants and control valves free of obstructions.
G. Provide means of removing mud from vehicle wheels before entering public streets.
H. Use existing onsite roads for construction traffic.
I. Verify with local Authorities Having Jurisdiction regarding temporary fire lanes and related access.

1.3 PARKING

A. Using existing parking facilities by construction personnel is permitted.
B. Do not allow heavy or tracked vehicles or construction equipment in parking areas.
C. Maintenance:
   1. Maintain traffic and parking areas in sound condition free of excavated material, construction equipment, products, mud, snow, and ice.

2. Maintain existing and permanent paved areas used for construction. Promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

D. Removal, Repair:
   1. Remove temporary materials and construction before Substantial Completion.
   2. Remove underground work and compacted materials to 2-foot depth. Fill and grade site as specified.
   3. Repair existing facilities damaged by use, to original condition.

E. Mud from Site Vehicles: Provide way to remove mud from wheels before entering streets.

1.4 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain a clean and orderly site.

B. Remove waste materials, debris, and rubbish from site and dispose off-site as required to maintain clean site.

1.5 TRAFFIC REGULATION

A. Contractor’s Responsibilities
   1. Provide Traffic Control Plan (TCP) as necessary for phased construction.
   2. TCP must be signed and sealed by a professional engineer licensed in Texas.
   3. Designate a responsible individual for TCP replacement and maintenance.

B. Signs, Signals, And Devices:
   1. Post- and Wall-Mounted Traffic Control and Informational Signs: As approved by authority having jurisdiction and/or Texas Manual on Uniform Traffic Control Devices (TMUTCD) and/or TxDOT Standards.
   2. Traffic Control Signals: As approved by local jurisdictions.
   3. Traffic Cones and Drums: As approved by authority having jurisdiction.
   4. Flares and Lights: As approved by authority having jurisdiction.
   5. Flagperson Equipment: As required by authority having jurisdiction.

C. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

D. Flares and Lights: Use during hours of low visibility to delineate traffic lanes and guide traffic.

E. Haul Routes:
   1. Consult with authority having jurisdiction, establish public thoroughfares to use for haul routes and site access.
   2. Confine construction traffic to designated haul routes.
   3. Provide traffic control at critical areas of haul routes to regulate traffic and minimize interference with public traffic.

F. Traffic Signs d Signals:
   1. Provide signs at approaches to site and onsite, crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
   2. Provide, operate, and maintain traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control and areas affected by Contractor operations.
   3. Relocate as Work progresses to maintain effective traffic control.

G. Removal:
   1. Remove equipment and devices when no longer required.
   2. Repair damage caused by installation.
   3. Remove post settings to 2-foot depth.

1.6 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas as well as protect existing facilities and adjacent properties from damage from construction operations. Allow for Owner's use of site.
B. Provide barricades and covered walkways required by authorities having jurisdiction for:
   1. Public rights-of-way.
   2. Public access to existing buildings.
C. Replace damaged items condition to original condition and protect items designated to remain:
   1. Trees.
   2. Shrubbery.
   3. Lawns.
D. Protect site improvements including but not limited to pavements, walkways, and drainage structures from damage. Replace damaged site improvements to original condition.
E. Protect non-owned vehicular traffic and stored materials from damage.

1.7 FENCING

A. Construction: Commercial-grade chain-link fence.
B. Provide 6-foot-high fence around construction site and temporary materials storage area equipped with vehicular and pedestrian gates with locks.

1.8 SECURITY

A. Security Program:
   1. Protect Work, existing premises, and Owner operations from theft, vandalism, and unauthorized entry.
   2. Initiate program at Project mobilization.
B. Entry Control:
   1. Restrict entrance of persons and vehicles into Project site.
   2. Allow entrance only to authorized persons with proper identification.

1.9 WATER CONTROL

A. Grade site to drain.
B. Maintain excavations free of water.
C. Provide, operate, and maintain pumping equipment.
D. Protect site from puddling and running water. Provide water barriers required to protect site from soil erosion.
E. Provide water barriers required to protect existing buildings from puddling, ponding, or other water accumulation that may damage foundations or other subsurface construction.

1.10 DUST CONTROL

A. Execute Work to minimize raising dust from construction operations.

1.11 EROSION AND SEDIMENT CONTROL

A. Plan and execute construction to control surface drainage from cuts, fills, borrow, and waste disposal areas. Prevent erosion and sedimentation.
B. Minimize surface area of bare soil exposed at one time.

C. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow resulting in erosion.
D. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
E. Periodically inspect earthwork to detect evidence of erosion and sedimentation. Promptly apply corrective measures.
F. Comply with site Section 01 57 23 “Temporary Stormwater Pollution Control.”

1.12 POLLUTION CONTROL

A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.13 PROTECT WORK

A. Protect installed Work and provide special protection where specified in Specifications.
B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.
C. Protect finished walkways, drives, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
D. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic/activity necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

1.14 REMOVE UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary above-grade utilities, equipment, facilities, and materials as soon as permanent facilities can be utilized.
B. Remove risers for underground utilities to minimum 2-foot depth and cap.
C. Remove buried equipment, facilities, and materials completely to minimum 2-foot depth and cap.
D. Backfill excavations as specified in other sections and grade site as indicated.
E. Clean and repair damage caused by installation or temporary work.
F. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction, to specified condition.
G. Remove at Work completion:
    1. Office.
    2. Storage sheds.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 57 23 – TEMPORARY STORMWATER POLLUTION CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Contractor responsibilities.
   2. Submittals.
   3. Erosion and sediment controls.

B. Related Requirements:
   1. Local jurisdiction requirements.
   2. Division 01 Specification Sections apply to Work of this Section.

1.2 CONTRACTOR RESPONSIBILITIES

A. Contractor is solely responsible for meeting all TCEQ and EPA requirements for stormwater pollution prevention:
   1. Develop a Stormwater Pollution Prevention Plan (SWPPP) if not provided.
   2. File Notice of Intent (NOI) and include Owner as an "Operator;"
   3. Install and maintain all erosion control measures and best management practices (BMPs).
   4. Perform inspections and prepare reports; and
   5. File Notice of Termination (NOT).

1.3 SUBMITTALS

A. Submit to Engineer, SWPPP, Submittal Procedures, and all other related documentation conforming to Section 01 33 00 "Submittal Procedures."

1.4 EROSION AND SEDIMENT CONTROLS

A. Implement structural measures to divert flows from exposed soils, temporarily store flows, or otherwise limit run-off and discharge of pollutants from exposed areas of site. Timely implement structural practices as specified in SWPPP during construction to minimize erosion and sediment run-off.

B. Stabilized Ingress/Egress:
   1. Provide stabilized access to/from construction site as soon as practical per SWPPP.
   2. Ensure any soil tracked off-site is cleaned from existing roads, alleys, and any adjacent properties as soon as possible. Check for any pollutants (mud, silt, sand, cement, construction materials, etc.) tracked, or washed off-site, and perform necessary clean-up measures, at the end of each workday.

C. Silt Fences/Diversion Berms: Provide silt fences and/or diversion berms as a temporary structural practice to minimize erosion and sediment runoff, as necessary. Properly install silt fences and/or diversion berms to effectively retain sediment immediately after completing each phase of work where erosion would occur as sheet and rill erosion (clearing and grubbing, excavation, embankment, grading, etc.).

D. Sand/Gravel Bags: Provide sand/gravel bags as a temporary structural practice to minimize erosion and sediment runoff. Properly place bags to effectively retain sediment immediately after completing each phase of work (clearing and grubbing, excavation, embankment, grading, etc.) in each independent runoff area (after clearing and grubbing between ridge and drain, place bags as work progresses, remove/replace/relocate bags as needed for work to progress in drainage area). Replace sand/gravel bags no longer in good condition, as needed.

E. Site Stabilization:
   1. Minimize surface area of base soil material at one time.
   2. Implement necessary stabilization measures including:
      a. Temporary/permanent seeding/sodding.
      b. Mulching.
      c. Geotextiles.
      d. Vegetative buffer strips.
      e. Paving.
      f. Rock riprap; and/or
      g. Rock-filled gabions.
      h. Inlet protection.
   3. Implement stabilization measures per SWPPP.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Products.
   2. Product delivery requirements.
   3. Product storage and handling requirements.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 PRODUCTS

A. At minimum, comply with specified requirements and reference standards.

B. Specified products define standard of quality, type, function, dimension, appearance, and performance required.

C. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.

1.3 PRODUCT DELIVERY REQUIREMENTS

A. Transport and handle products per manufacturer instructions.

B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.

C. Provide equipment and personnel to handle products. Prevent soiling, disfigurement, or damage.

D. Owner will not assist in offloading or accepting product deliveries.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Store and protect products per manufacturer instructions.

B. Store products with seals and labels intact and legible.

C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.

D. For exterior storage of fabricated products, place products on sloped supports above ground.

E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

F. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.

G. Provide equipment and personnel to store products. Prevent soiling, disfigurement, or damage.

H. Arrange product storage to permit access for inspection. Periodically inspect to verify products are undamaged and maintained in acceptable condition.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Surveying.
2. Closeout procedures.
3. Demonstration and instructions.
4. Testing, adjusting, and balancing.
5. Project record documents.
6. Product warranties and product bonds.
7. Examination.
8. Preparation.
9. Execution.
10. Protecting installed construction.
11. Final cleaning.

B. Related Sections:
1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SURVEYING

A. Employ land surveyor registered in State of Texas and acceptable to Engineer.
B. Locate and protect survey control and reference points. Promptly notify Engineer of discrepancies discovered.
C. Control datum for survey is indicated on Drawings.
D. Verify setbacks, easements, and rights of way. Confirm Drawing dimensions and elevations.
E. Provide field engineering services. Establish elevations, lines, and levels using recognized engineering survey practices.
F. Submit copy of Site Drawing signed by land surveyor certifying elevations and locations of Work are per Contract Documents.
G. Maintain complete and accurate log of control and survey Work as Work progresses.
H. Protect survey control points before starting Site Work. Preserve permanent reference points during construction.
I. Promptly report to Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.
J. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.

1.3 CLOSEOUT PROCEDURES

A. Prerequisites to Substantial Completion. Complete following items before requesting Certification of Substantial Completion, either for entire Work or portions of Work:
1. Submit maintenance manuals, Project record documents, and other similar final record data per this Section.
2. Complete facility startup, testing, adjusting, balancing systems and equipment, demonstrations, and instructions to Owner's operating and maintenance personnel as specified per this Section.

3. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to complete or correct, value of incomplete or nonconforming Work, reason for incompletion, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
4. Obtain and submit releases enabling Owner's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
5. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
6. Change locks and transmit keys directly to Owner. Advise Owner's personnel of change-over in security provisions.
7. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
8. Perform final cleaning per this Section.

B. Substantial Completion Inspection:
1. When Contractor considers Work substantially complete, submit to Engineer and Owner:
   a. Written certificate that Work, or designated portion, is substantially complete.
   b. List of items to complete or correct (initial punch list).
2. Within seven days after receipt of request for Substantial Completion, Engineer and Owner will inspect to determine if Work or designated portion is substantially complete.
3. If Engineer and Owner determine Work is NOT substantially complete:
   a. Engineer and Owner will promptly notify Contractor in writing, stating reasons for opinion.
   b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Engineer and Owner.
   c. Engineer and Owner will reinspect Work.
   d. Repeat until Work passes inspection.
4. When Engineer and Owner finds Work is substantially complete, they will:
   a. Prepare Certificate of Substantial Completion on Engineer-provided form, accompanied by Contractor's list of items to complete or correct as verified and amended by Engineer and Owner (final punch list).
   b. Submit Certificate to Owner and Contractor for written acceptance of responsibilities assigned in Certificate.
5. After Work is substantially complete, Contractor shall:
   a. Allow Owner occupancy of Project under provisions stated in Certificate of Substantial Completion.
   b. Complete Work listed for completion or correction within time stipulated.

C. Prerequisites for Final Completion. Complete following items before requesting final acceptance and final payment.
1. When Contractor considers Work complete, submit written certification that:
   a. Contract Documents were reviewed.
   b. Work was examined for compliance with Contract Documents.
   c. Work was completed per Contract Documents.
   d. Work is complete and ready for final inspection.

2. Submit:
    a. Final punch list indicating all items are complete or correct.
    b. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations, where required.
    c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
    d. Accounting statement for final changes to Contract Sum.
    e. Contractor's affidavit of payment of debts and claims on Contractor's Affidavit of Payment of Debts and Claims form.
    f. Contractor affidavit of release of liens on Contractor's Affidavit of Release of Liens form.
    g. Consent of surety to final payment on Contractor’s Consent of Surety to Final Payment form.
3. Perform final cleaning for Contractor-soiled areas per this Section.

D. Final Completion Inspection:
1. Within seven days after receipt of request for final inspection, Engineer and Owner will inspect to determine if Work or designated portion is complete.
2. If Engineer and Owner consider Work incomplete or defective:
    a. Engineer and Owner will promptly notify Contractor in writing, listing incomplete or defective Work.
    b. Contractor shall remedy stated deficiencies and send second written request to Engineer and Owner that Work is complete.
    c. Engineer and Owner will reinspect Work.
    d. Redo and Inspect Deficient Work: Repeated until Work passes inspection.
    e. Engineer and Owner inspection.

1.4 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate Project equipment by authorized manufacturer's representative knowledgeable about Project.
B. Demonstrate startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at equipment location.
C. Required instruction time for each item of equipment and system is specified in individual Specifications.

1.5 TESTING, ADJUSTING, AND BALANCING

A. Owner will appoint, employ, and pay for services of independent firm to perform testing, adjusting, and balancing.

1.6 PROJECT RECORD DOCUMENTS

A. Maintain onsite, one set of these record documents and record actual revisions to Work:
1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to Contract.
5. Reviewed Shop Drawings, product data, and Samples.
6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.
C. Store record documents separate from documents used for construction.
D. Record information concurrent with construction progress, not less than weekly.
E. Specifications: Legibly mark and record, at each product Section, description of actual products installed, including:
    1. Manufacturer's name, product model and number.
    2. Product substitutions or alternates used.
    3. Changes made by Addenda and modifications.
F. Record Drawings and Shop Drawings. Legibly mark each item to record actual construction as:
    1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in Work, and change orders.
    2. Include locations of concealed elements of Work.
    3. Identify depth of buried utility lines and provide dimensions showing distances from permanent facility components parallel to utilities.
    4. Dimension ends, corners, and junctions of buried utilities to permanent facility components using triangulation.
    5. Identify and locate existing buried or concealed items encountered during Project.
    6. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
    7. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of Work.
    8. Field changes of dimension and detail.
    9. Details not on original Drawings.
G. Submit PDF electronic files of marked-up documents to Engineer with claim for final Application for Payment.

1.7 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers within 10 days after completion of applicable item of Work.
B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
C. Verify documents are in proper form, contain full information, and notarized.
D. Co-execute submittals when required.
E. Include TOC and assemble in binder with durable plastic cover.
F. Submit before final Application for Payment.
G. Time of Submittals:
    1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
    2. Make other submittals within 10 days after date of Substantial Completion, before final Application for Payment.
    3. For items of Work for which acceptance is delayed beyond Substantial Completion, submit within 10 days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify existing Site conditions and substrate surfaces are acceptable for subsequent Work.
B. Beginning new Work means acceptance of existing conditions.
C. Verify existing substrate can structurally support or attach new Work applied.
D. Examine and verify specific conditions described in individual Specifications.
E. Verify utility services are available with correct characteristics and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces before applying next material or substance per manufacturer instructions.
B. Seal cracks or openings of substrate before applying next material or substance.
C. Apply manufacturer-required or -recommended substrate primer, sealer, or conditioner before applying new material or substance in contact or bond.

3.3 EXECUTION

A. Comply with manufacturer installation instructions, performing each step, in sequence. Maintain one set of manufacturer's installation instructions at Project Site during installation and until completion of construction.
B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
C. Verify field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.
D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
    1. Secure Work true-to-line and level and within specified tolerances, or if not specified, industry-recognized tolerances.
    2. Physically separate products in place, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.
    3. Exposed Joints: Provide uniform joint width and arrange to obtain best visual effect. Refer questionable visual-effect choices to Engineer for final decision.
E. Allow for expansion of materials and building movement.
F. Climatic Conditions and Project Status: Install each unit of Work under conditions to ensure best possible results in coordination with entire Project.
    1. Isolate each unit of Work from incompatible Work necessary to prevent deterioration.
    2. Coordinate enclosure of Work with required inspections and tests to minimize necessity of uncovering Work for those purposes.
G. Adjust operating products and equipment to ensure smooth and unhindered operation.
H. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction. Lubricate operable components recommended by manufacturer.

3.4 PROTECTING INSTALLED CONSTRUCTION

A. Protect installed Work and provide special protection where specified.
B. Prohibit traffic from landscaped areas.

3.5 FINAL CLEANING

A. Execute final cleaning before final Project assessment. Employ experienced personnel or professional cleaning firm.
B. Clean site. Sweep paved areas and rake landscaped surfaces clean.
C. Remove waste and surplus materials, rubbish, and construction facilities from site.

END OF SECTION

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Cast-in-place concrete.
   2. Concrete pavement, driveways, curb, and gutter.
   3. Sidewalks, flatwork, and other miscellaneous concrete.
   4. Section applies where Contractor elects to remove, or is required to remove, and replace concrete pavement and driveway as part of the construction. Section applies also for repair or replacement of facilities otherwise damaged by Contractor operations.

B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.

1.2 REFERENCES

A. TxDOT Item 360 – Concrete Pavement
B. TxDOT Item 421 – Hydraulic Cement Concrete
C. TxDOT Item 440 – Reinforcement for Concrete
D. ACI 211 – Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
E. ACI 301 – Specifications for Structural Concrete
F. ACI 305R – Standard Specification for Hot Weather Concreting
G. ACI 306 – Standard Specification for Cold Weather Concreting
H. ACI 315 – Details and Detailing of Concrete Reinforcement
I. ASTM A36 – Standard Specification for Carbon Structural Steel
J. ASTM A307 – Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60,000 PSI Tensile Strength
K. ASTM C94 – Standard Specification for Ready-Mixed Concrete
L. ASTM C171 – Standard Specification for Sheet Materials for Curing Concrete
M. ASTM C309 – Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
N. ASTM C33 – Standard Specification for Concrete Aggregates
O. ASTM C150 – Standard Specification for Portland Cement
P. ASTM A615 – Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
Q. ASTM C494 – Standard Specification for Chemical Admixtures for Concrete
R. ASTM C260 – Standard Specification for Air-Entraining Admixtures for Concrete
S. ASTM C881 – Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
T. ASTM D1751 – Standard Specification for Preformed Expansion Joint Filler for Concrete paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
U. TAC – Texas Accessibility Standards

1.3 SUBMITTALS

A. Submit product data in accordance with Section 01 33 00 “Submittal Procedures.”
B. Product Data: For each type of manufactured material and product indicated.
C. Design Mixes: For each concrete pavement mix. Include alternate mix designs when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
D. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated, based on comprehensive testing of current materials:
    1. Cementitious materials and aggregates.
    2. Steel reinforcement and reinforcement accessories.
    3. Fiber reinforcement.
    4. Admixtures.
    5. Curing compounds.
    6. Applied finish materials.
    7. Bonding agent or adhesive.
    8. Joint fillers.
E. Shop Drawings for reinforcement detailing, fabricating, bending, and placing concrete reinforcement. Comply with ACI 315 “Manual of Standard Practice for Detailing Reinforced Concrete Structures,” showing bar schedules, stirrup spacing, bent bar diagrams, materials, steel grades, arrangement of concrete reinforcement, and methods of support.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Experienced installer who has completed pavement work similar in material, design, and extent indicated for this Project and whose work resulted in construction with a record of successful in-service performance.
B. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with TxDOT Item 421 and ASTM C94 requirements for production facilities and equipment. Manufacturer must be certified according to the National Ready Mix Concrete Association's Plant Certification Program.
C. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction.
D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant and each aggregate from one source.
E. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixes.

1.5 PROJECT CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities and emergency services.

PART 2 - PRODUCTS

2.1 CONCRETE MIXTURE

A. Furnish mix design using ACI 211, ACI 301, Tex-470-A, or other approved procedure.

B. At least 15 days prior to beginning any concrete pavement construction, Contractor shall submit mix design, test certificates, test results, and all necessary information as specified in TxDOT Item 421 for Engineer approval.
C. Use a qualified independent testing agency for preparing and reporting proposed mix design for the trial batch method. Do not use Owner's field quality-control testing agency as the independent testing agency.
D. The following concrete classifications are to be used on this project as specified herein:
    1. **Class A:** Curb and gutter, valley gutters, driveways, sidewalks, curb ramps, medians, and miscellaneous slabs.
        a. Maximum allowable Water-to-Cement ratio: 0.60.
        b. Minimum 28 Day Compressive Strength: 3,000 psi.
        c. Slump: 3-5 in.
        d. Air Entrainment: 3-7 percent.
    2. **Class B:** Concrete riprap.
        a. Maximum allowable Water-to-Cement ratio: 0.40.
        b. Minimum 28 Day Compressive Strength: 2,000 psi.
        c. Slump: 3-5 in.
        d. Air Entrainment: 3-7 percent.
    3. **Modified Class C**: Cast-in-place manholes, junction boxes, storm sewer inlet boxes, valve vaults, direct traffic culvert, and bridge decks.
    4. Minimum six sacks cement per cubic yard.
    5. Maximum allowable water-to-cement ratio: 5 gallons per sack of cement.
        a. Minimum 28-day Compressive Strength: 4,000 psi.
        b. Slump: 3-5 in.
        c. Air Entrainment: 3-7 percent.

2.2 CEMENT

A. Use cement of the same type and from the same source for all of Project.
B. Portland Cement: ASTM C150, Type I, II, I/II, IL, IP, IS,IT, or V.
C. Use only cement types for concrete classifications as specified in TxDOT Item 421, Section 4.2.1.

2.3 AGGREGATE

A. Provide aggregate to meets all requirements of TxDOT Item 421, Section 2.6 and ASTM C33.
B. Shall be uniformly graded and from a single source.
C. Shall contain a coarse aggregate with a maximum nominal size of 1 1/2 inches.

2.4 WATER

A. Furnish clean water that meets all the requirements of TxDOT Item 421, Section 2.5.

2.5 STEEL REINFORCEMENT

A. Deformed Steel Bar Reinforcement: TxDOT Item 440, ASTM A615, Grade 60
B. Dowels: TxDOT Item 440, ASTM A615, Grade 60. Cut bars true to length with ends square and free of burrs.
C. Deformed Tie Bars: TxDOT Item 360, ASTM A615, Grade 60.

D. Hook Bolts: ASTM A307, Grade A, internally and externally threaded. Design hook-bolt joint assembly to hold coupling against pavement form and in position during concreting operations, and to permit removal without damage to concrete or hook bolt.

E. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement bars, welded wire fabric, and dowels in place. Manufacture bar supports according to CRSI "Manual of Standard Practice," from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete, and:
   1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.
   2. Space reinforcing supports at 5 feet, 0-inch maximum in any direction.

2.6 ADMIXTURES

A. Use of any material added to the concrete mix shall be approved by Owner representative.
   1. Admixtures certified by manufacturer to contain no more than 0.1-percent water-soluble chloride ions by mass of cement and compatible with other admixtures.
   2. Air-Entraining Admixture: ASTM C260. Certified by manufacturer compatible with other required admixtures.
   3. Water-Reducing Admixture: ASTM C494, Type A.
   4. High-Range, Water-Reducing Admixture: ASTM C494, Type F or Type G.
   5. Water-Reducing and Accelerating Admixture: ASTM C494, Type E.
   6. Water-Reducing and Retarding Admixture: ASTM C494, Type D.

2.7 COVER MATERIAL FOR CURING

A. Curing materials shall conform to one of these Specifications:
   1. Liquid membrane-forming compounds for curing concrete shall conform to requirements of ASTM C309, Type 2 (all resin base).
   2. White polyethylene film for curing concrete shall conform to requirements of ASTM C171.
   3. White burlap-polyethylene sheeting for curing concrete shall conform to requirements of ASTM C171.
   4. Waterproof paper for curing concrete shall conform to requirements of ASTM C171.

2.8 FORMS

A. Forms shall be constructed of steel except for curved areas and sidewalks.
   1. Use flexible or curved forms for curves of a radius 100 feet or less.
   2. Forms should be no less than 10 feet in length.

B. Form-Release Agent: Commercially formulated form-release agent with a maximum of 350 g/l volatile organic compounds (VOCs) that will not bond with, stain, or adversely affect concrete surfaces, nor impair subsequent treatments of concrete surfaces.

C. Form Ties: Factory-fabricated, adjustable-length, removable or snap-off metal form ties designed to prevent form deflection and to prevent spalling of concrete upon removal. Provide units to leave no metal closer than 1-1/2 inches to exposed concrete surface plane.
   1. Provide ties so, when removed, will leave holes not larger than 1-inch in diameter in the concrete surface.

2.9 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber.
B. Texture Surface for Ramps:
   1. Meet requirements of Texas Accessibility Standards.
   2. Color as selected by Owner.
   3. Surface should be non-skid.
   4. Durabak with Safti-Traxx Detacable Warning System by Cote-L Distribution Company or approved equal.
C. Bonding Agent: Polyvinyl acetate or acrylic base.
D. Sand Cushion: Clean, manufactured, or natural sand with plasticity index of 8 or less.
E. Epoxy Adhesive: ASTM C881, two-component material suitable for use on dry or damp surfaces. Provide material type, grade, and class to suit Project requirements.

2.10 FIBER REINFORCEMENT

2.11 FIBER REINFORCEMENT: TXDOT ITEM 440, FIBER MESH, CAPROLAN RC, OR APPROVED EQUAL.

2.12 MATERIAL AND RATE OF APPLICATION SHALL BE APPROVED BY ENGINEER PRIOR TO PLACEMENT.

2.13 FIBER REINFORCEMENT IS ALLOWED AT CONTRACTORS DISCRETION FOR SLAB-ON-GRADE APPLICATIONS UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS OR SPECIFICATIONS.

PART 3 - EXECUTION

3.1 PREPARATION

A. Proof-roll prepared subbase surface to check for unstable areas and verify need for additional compaction. Proceed with pavement only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.
B. Remove loose material from compacted subbase surface immediately before placing concrete.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
B. Clean forms after each use and coat with form release agent to ensure separation from concrete without damage.

3.3 STEEL REINFORCEMENT

A. Accurately place and secure in position all reinforcing steel as shown on the plans. Comply with TxDOT Item 360 for all steel reinforcement installation.
B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
C. Arrange, space, and securely tie bars, and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

3.4 JOINTS

A. Construct isolation, contraction, construction joints, and tool edgings true-to-line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than a half hour unless pavement terminates at isolation joints.
   1. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of pavement strips, unless otherwise indicated.
   2. Provide tie bars at sides of pavement strips where indicated.
   3. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Form Isolation Joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
   1. Extend joint fillers full width and depth of joint.
   2. Terminate joint filler less than 1/2-inch or more than 1-inch below finished surface if joint sealant is indicated.
   3. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
   4. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
   5. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

D. Driveway and Pavement Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with groover tool. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces. Refer to Plans for joint dimensions.

E. Sidewalks:
   1. Control Joints: Saw-cut 1/8-inch control joints after curing to depth shown on Plans. Joints shall be clean, straight lines as shown on Plans. Concrete surface shall be cleaned of all debris after installation.
   2. Expansion Joints: Install at formed construction joints.

3.5 CONCRETE PLACEMENT

A. Inspection: Before placing concrete, inspect and complete formwork installation, reinforcement steel, and items to be embedded or cast in.

B. Remove snow, ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.

C. Moisten subbase to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until at required finish elevation and alignment.

D. Comply with requirements and with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete.

E. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

F. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures to consolidate concrete according to recommendations in ACI 309R. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.

G. Place concrete in two operations; strike off initial pour for entire width of placement and to the required depth below finish surface. Lay welded wire fabric or fabricated bar mats immediately in final position. Place top layer of concrete, strike off, and screed. Remove and replace portions of bottom layer of concrete placed more than 15 minutes without covered by top layer or use bonding agent if approved by Engineer.

H. Screed pavement surfaces with a straightedge and strike off. Commence initial floating using bull floats or darbies to form an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading dry-shake surface treatments.

I. When adjoining pavement lanes are placed in separate pours, do not operate equipment on concrete until pavement has attained 85 percent of 28-day compressive strength.

J. Cold-Weather Placement: Comply with ACI 306.1. Protect concrete work from physical damage or reduced strength caused by frost, freezing actions, or low temperatures.
   1. When air temperature has fallen to, or is expected to fall below, 40 degrees F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 and not more than 80 degrees F at point of placement.
   2. Do not use frozen materials or materials containing ice or snow.
   3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.

K. Hot-Weather Placement: Place concrete according to recommendations in ACI 305R and as follows when hot-weather conditions exist:
   1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 degrees F. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor option.
   2. Cover reinforcement steel with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
   3. Fog-spray forms, reinforcement steel, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.6 CONCRETE FINISHING

A. DO NOT wet concrete surfaces during screeding, initial floating, or finishing operations.

B. Float Finish: Begin second floating operation when bleed-water sheen disappears, and concrete surface stiffens sufficiently to permit operations. Float surface with power-driven floats or hand-floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
   1. Light-to-Medium Broom Finish: For concrete sidewalks.

2. Medium-to-Coarse-Textured Broom Finish: For concrete pavement and driveways, provide a medium-to-coarse finish by dragging float-finished concrete surface 1/16- to 1/8-inch deep with a stiff-bristled broom, perpendicular to line of traffic.

C. Wall Finishes: Concrete walls shall be form-revealed finish. Reference Plans for forms dimension control.

3.7 CONCRETE PROTECTION AND CURING

A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and follow recommendations in ACI 305R for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb./sq. ft. x H before and during finishing operations. Apply according to manufacturer written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Begin curing after finishing concrete but not before free water disappears from concrete surface.

D. Curing Methods: Cure concrete by moisture-curing, moisture-retaining-cover-curing, curing compound, or a combination.

1. Moisture Curing: Keep surfaces continuously moist for no less than seven days with water, continuous water-fog spray, and absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.8 FIELD QUALITY CONTROL

A. Testing Agency: Contractor shall sample materials, perform tests, and submit test reports during concrete placement. Sampling and testing for quality control include those specified in this Article.

B. Testing Services: Perform testing according to these requirements:

1. Uniformity of Concrete: Tex-472-A
2. Slump: Tex-415-A; one test at point of placement for each compressive-strength test, but not less than one test for each day's pour of each type of concrete. Additional tests will be required when concrete consistency changes.
3. Air Content: Tex-416-A, pressure method; one test for each compressive-strength test, but not less than one test for each day's pour of each type of air-entrained concrete.
4. Concrete Temperature: Tex-422-A; one test hourly when air temperature is 40 degrees F and below and 80 degrees F and above, and one test for each set of compressive-strength specimens.
5. Compression Test Specimens: Tex-447-A; one set of four standard cylinders for each compressive-strength test, unless otherwise indicated. Cylinders shall be

molded and stored for laboratory-cured test specimens unless field-cured test specimens are required.

6. Compressive-Strength Tests: Tex-418-A; one set for each day's pour of each concrete class exceeding 5 cubic yards, but less than 25 cubic yards, plus one set for each additional 50 cubic yards. One specimen shall be tested at seven days and two specimens at 28 days. Retain one specimen in reserve for later testing if required.
7. When frequency of testing will provide fewer than five compressive-strength tests for a given class of concrete, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

C. Test results shall be reported in writing to Engineer and Contractor within 24 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing agency, concrete type and class, location of concrete batch in pavement, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both seven- and 28-day tests.

D. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but not used as the sole basis for approval or rejection.

E. Additional Tests: Contractor shall make additional tests of concrete when test results indicate slump, air entrainment, concrete strengths, or other requirements are not met, as directed by Engineer. Contractor may conduct tests to determine adequacy of concrete by cored cylinders complying with Tex-424-A, or by other methods as directed.

F. Contractor shall pay for failing tests.

G. Questionable Concrete:

1. Concrete considered “Questionable Concrete” where any of the following test evaluations occur:
    a. Individual test strength is below specified strength; or
    b. Samples of concrete for acceptance test cylinders or acceptance test beams are not representative of concrete-in-place in the pavement; or
    c. Insufficient or inadequate concrete curing; or
    d. Insufficient number of acceptance test cylinders or acceptance test beams for days concreting was made for testing.
2. Except where core tests will impair the strength of the structure, core test as directed by Owner shall be made at no cost to Owner to resolve Questionable Concrete. If core tests fail to demonstrate test strength required by Contract Documents or structural analysis does not confirm the adequacy of structure, Owner may, at his discretion, reject work or require load tests or additional construction. Should structural analysis confirm the adequacy of pavement, Owner may, at his discretion, accept concrete with credit for full value of concrete delivered to site in accordance with General Conditions.
3. Contractor shall pay all costs incurred in providing the additional testing or analysis to resolve acceptability of Questionable Concrete.
4. Core Tests:
    a. Three representative cores shall be taken from each member or area of concrete for each test considered questionable. Location of cores shall be as directed by Owner to least impair pavement strength. Damaged cores shall be replaced.
    b. Cores shall be obtained and tested in accordance with Tex-424-A except that if concrete in structure will be dry under service conditions cores shall be air dried (temperature 60 to 80 degrees F, and relative humidity less than 60 percent) for seven days before test and shall be tested dry. If concrete in

structure will be more than superficially wet under service conditions, cores shall be immersed in water for at least 48 hours and tested wet.

c. Questionable concrete will be considered structurally acceptable if average of cores is equal to or greater than 90 percent of the specified strength and no single core is greater than 500 psi below specified compressive strength (50 psi below specified beam strength).

3.9 REPAIRS OF DEFECTIVE PAVEMENT SLABS

A. Replace or repair broken slabs, random cracks, nonworking contraction joints near cracks, and spalls along joints and cracks as specified at no cost to Owner.

B. Broken Slabs: Entirely remove and replace pavement slabs containing multiple cracks through more than 1/4 of the depth of slab separating slab into three or more parts and pavement slabs with one or more cracks through more than 1/4 of pavement depth extending diagonally across more than 1/3 of the slab either transversely or longitudinally. Repair pavement slabs containing a single diagonal crack intersecting transverse and longitudinal joints within 1/3 of the width and length of slab from corner by removing and replacing smaller portion of slab.

C. Grooving and Repairing Cracks in Pavement Slabs: Random cracks penetrating more than 1/4 of pavement depth shall be grooved, crack filled with epoxy-resin, and groove filled with epoxy-resin grout. Groove top of crack to a minimum depth of 3/4-inch and a width not less than 3/8 nor more than 5/8-inch by means of an approved grooving machine. Grooving machine shall be vertical rotary-cutting and capable of following closely the crack path and of widening the crack top to the required section without spalling or otherwise damaging concrete. Fill random cracks that are tight and penetrate less than 1/4 of the pavement depth with epoxy-resin. When necessary, determine depth of crack penetration by core inspection of not less than 4 inches in diameter, drilled by Contractor, at his expense, at locations directed. Refill core holes with Portland cement concrete, bonded to pavement with epoxy-resin grout. In addition, when longitudinal crack is continuous across one or more slabs and penetrates more than 1/4 of the pavement depth, drill core holes not less than 6 inches in diameter through full depth of slab at both ends of crack. In operation to drill cores at the longitudinal-crack ends, position core bits so core removed will include not more than 3 inches of crack. Use sandblasting and high-pressure air jets to remove any fines near apparent ends of crack to permit accurate determination of crack ends. Remove all fines, dust, and other loose material on cored holes wall by scrubbing with a stiff-bristle brush, followed by washing and dewatering core hole. Refill these core holes with epoxy-resin concrete. Apply a prime coat of epoxy-resin binder thinned with three parts toluene to seven parts epoxy binder, by volume, and brush into vertical wall of core hole. Delay placement of epoxy-resin concrete until prime coat becomes stringy or approaches dry to touch. Place epoxy-resin concrete in layers not over 6 inches thick. Time interval between additional layer placement shall be so epoxy-resin concrete temperature does not exceed 140 degrees F any time during hardening.

3.10 NONWORKING (UNCRACKED) CONTRACTION JOINTS

A. When a transverse random crack terminates in or crosses a transverse contraction joint, fill uncracked portion of the joint with epoxy-resin mortar or grout and crack shall be routed and sealed. When a transverse random crack approximately parallels planned contraction joint and is within 25 percent of slab length from a contraction joint, route and seal crack, and fill joint with epoxy-resin grout or mortar. When a transverse random crack is more than 25 percent of slab length from nearest contraction joint, seal joint and crack.

B. Thoroughly clean joints to be filled with epoxy-resin mortar or grout.

3.11 SPALLING ALONG JOINTS AND CRACKS

A. Repair spalls by making a saw cut at least 1-inch outside spalled area to a minimum depth of 2 inches. When spalled area abuts a joint, saw cut shall be made to a depth of 2 inches or 1/6 slab thickness, whichever is greater. Remove concrete between saw cut and joint or primary crack to a minimum depth of 2 inches below original concrete surface, and additional depth where necessary to expose a surface of sound, unweathered concrete, uncontaminated by oils, grease, deicing salts, solutions, or other substances inhibiting the epoxy-resin bonding material performance. Accomplish removal of concrete volume between saw cut and joint or primary crack using a hydraulic impact hammer or other method approved by Owner Representative. Contractor shall exercise care in removing required concrete, so no damage is inflicted on adjoining concrete slab. Contractor shall repair damage of adjoining concrete, at his expense, to satisfaction of Owner Representative.

B. Thoroughly clean concrete void to patch with compressed air, sandblasting, or other approved method to remove all loose material. Apply a prime coat of epoxy-resin binder thinned with three parts toluene to seven parts epoxy binder, by volume, to dry, cleaned surface of all sides of cavity, except joint or primary crack face. Apply prime coat in a thin coating and scrub into surface with stiff-bristle brush. Delay placement of Portland cement concrete or epoxy-resin concrete or mortar until prime coat becomes stringy or approaches dry to touch. Then place epoxy concrete in the cavity in layers not exceeding 2 inches thick. Time interval between placement of additional layers shall be so temperature of epoxy-resin concrete does not exceed 140 degrees F at any time during hardening. Use mechanical plate, screed, float vibrators, or hand tampers to consolidate concrete or mortar. Remove excess mortar or concrete on adjacent surfaces of hardened concrete before it hardens. After finishing operations and while epoxy-resin concrete or mortar is still tacky, uniformly spread a thin coating of Portland cement on surface of repaired area and lightly brush into surface. If spalled area to patch abuts a working joint or working crack which penetrates full depth of a slab, use an insert or other bond-breaking medium to maintain working joints or cracks during repair work. Use surface embedment of flexible polyethylene or other suitable type hose to form a groove along working crack to fill with appropriate type of joint-sealing material. Carefully remove hose before concrete hardens sufficiently to form a high bond.

3.12 REMOVAL AND REPLACEMENT OF DEFECTIVE PAVEMENT AREAS

A. Remove and replace defective pavement areas as specified with pavements of the thickness and quality required by these Specifications. Carefully remove defective pavement so adjacent pavement will not be damaged and existing reinforcement at joints will be left intact. When replacing a portion of an unfractured slab, make a 2-inch deep saw cut transversely across slab in required location, and remove concrete to provide an essentially vertical face in remaining portion of slab. Prior to placement of fresh concrete, clean face of slab of debris and loose concrete then thoroughly coat with epoxy-resin grout. Epoxy-resin coating shall be approximately 1/16-inch and applied by scrubbing a thin coat of grout into surface with stiff-bristle brush followed by a second application. Place strips of polyethylene sheeting on vertical faces of adjacent slabs at juncture with slab to patch as a bond-breaking medium. Accomplish placement of fresh, Portland cement concrete while epoxy-resin is still tacky so grout coating is not removed. Construct longitudinal and transverse joints of replaced slab or portion as indicated. Replaced pavements will be paid

for at contract price but no payment made for defective pavements removed nor for cost of removing defective pavements.

3.13 TOLERANCE IN SLAB THICKNESS

A. Determine thickness of slab by average caliper measurement of cores tested in accordance with Tex-423-A. Owner's Representative may elect to measure thickness of concrete pavement prior to placement based on measurements from a string line stretched across forms or in plastic concrete behind concrete placing operation.

B. Remove and replace areas found deficient in thickness with concrete of thickness shown on Plans at Contractor expense. If cores are used to determine concrete thickness, Contractor shall fill core holes with non-shrink grout at his expense.

END OF SECTION

SECTION 31 10 00 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Site preparation, excavation, grading, trenching, and backfilling required for project. Excavation of whatever material encountered for all structures in project, as required by Drawings or directed by Engineer. Contractor disposes material required moved during site preparation, excess excavated material, or any material unsuitable for backfilling.
   2. Excavation not classified nor additional compensation allowed for rock. Bidders to investigate nature of material encountered in excavations as necessary and assume all responsibility for fully informing themselves of character of such material.
   3. Contractor furnishes all materials, equipment tools, labor, superintendence, and incidentals required to perform Work as indicated on Drawings, directed by Engineer, and specified.

B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Division 31 Specification Sections apply to Work of this Section.
   3. Division 32 Specification Sections apply to Work of this Section.
   4. Division 33 Specification Sections apply to Work of this Section.

1.2 TRENCH SAFETY

A. Contractor responsible for complying with all applicable State of Texas safety standards and applicable OSHA regulations concerning trench excavation, general excavation, and construction safety.

B. Contractor responsible for implementing trench safety system wherever trench depth exceeds 5 feet. Contractor refers to Section 31 41 10 “Trench Safety Systems” for approved trench safety methods for pipelines.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CLEARING SITE AREA

A. Clearing consists of removal and lawful disposal of all items in Project Area that do not meet requirements of project specifications and are an obstruction to proposed improvements. Such items might include vegetation, rubble, trees, tree roots, down timbers, snags, brush, pavements of various types, and rubbish within areas to clear. Individual trees, groups of trees, or other vegetation not required to be removed, and occurring outside earthwork area, shall be protected against unnecessary cutting, breaking, or skinning roots, skinning and brushing bark, or smothering trees by stockpiling construction materials or excavated materials within drip lines.

B. Use of explosives will not be allowed.
C. Solid items must be removed to a minimum depth of one foot below finished grade or subgrade elevation.
D. Remove hollow objects in entirety.
E. Removal of Concrete: Cut concrete at right-of-way line straight and vertical by sawing or other approved methods before removal of concrete in right-of-way.

3.2 DISPOSAL

A. Unless otherwise specified, any material cleared from Project Area becomes ownership of Contractor and disposed lawfully.

3.3 TRENCHING AND BACKFILLING PIPE MAINS

A. Pipe trench excavation to lines and grades shown on drawings and established in field. Trenching and backfilling for water pipe mains specified in other specification sections.

3.4 CLEAN UP

A. After completing all work regarding project, clean entire work area and any adjacent areas disturbed by construction of all construction debris, rocks and excess materials and Contractor removes all such material from site or highway right-of-way and disposes. Replace any sod disturbed by installing these facilities. Grade entire area to uniform surfaces and present a neat and clean appearance before final acceptance.

END OF SECTION

SECTION 31 20 00 – EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Operations required for excavation of proposed foundations.
2. Compaction of natural subgrades.
3. Placement and compaction of fill areas to grade.
4. Finish grading
5. Disposal of excess or unsuitable materials.
6. Earthwork must conform with dimensions and typical sections shown and within lines and grades established on Drawings.
7. Contractor informs and is satisfied to character, quantity, and distribution of material to excavate.

B. Related Sections:
1. Division 01 Specification Sections apply to Work of this Section.
2. Division 31 Specification Sections apply to Work of this Section.
3. Division 32 Specification Sections apply to Work of this Section.
4. Division 33 Specification Sections apply to Work of this Section.

1.2 CLASSIFICATIONS

A. Brief definitions of earthwork classifications:
1. Topsoil: Natural, friable surface soil possessing characteristics of representative soils onsite producing growths of grass or other vegetation. Topsoil growths includes grasses and other vegetation.
2. Subgrade: Surface portion where compacted earth fill or embankment is constructed.
3. Compacted Earth Fill or Embankment: Earth fill placed and compacted between top of existing grades and finish grade.
4. Finish Grading: Operations required for smoothing disturbed areas not overlaid with pavement.

1.3 WORK AFFECTING EXISTING UTILITIES

A. Protect above or below grade utilities which are to remain.
B. Do not take existing utilities out of service without specific authorization by Owner.

1.4 PROTECTION

A. Protect trees, shrubs, lawns, and other features remaining as portion of existing landscape.
B. Protect benchmarks, existing structures (not being removed), fences, roads, and paving.
C. Notify Engineer of unexpected subsurface conditions.
D. Where damage could result from continuing work, discontinue work in area until Engineer notifies Contractor of required modifications.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. Use equipment required to complete this project.
B. Grading Equipment: Furnish, operate, and maintain equipment as necessary to produce uniform layers, section, and smoothness of grade for compaction and drainage.
C. Furnish, operate, and maintain equipment for compaction of earth fills or embankments.
D. Miscellaneous Equipment: Scarifiers, disks, spring-tooth or spike-tooth harrows, earth-hauling equipment, and other equipment must be suitable for removal of material from excavation and construction of fills.

2.2 TOPSOIL

A. Obtain from excavation and fill areas. Strip and stockpile top 12 inches of material from areas.

PART 3 - EXECUTION

3.1 EXCAVATION

A. As shown on Drawings, excavate to lines, grades, and elevations.
B. During excavation, maintain grades for complete drainage. When directed, install temporary drains or drainage ditches to intercept/divert surface water and prevent interference or delay of work. No separate payment made for drainage control and pumping.
C. Stockpile excavated material in areas approved by Engineer.
D. Uniformly dress cut and fill slopes to slope, cross section, and alignment, as shown.
E. Strip or otherwise remove all vegetation, decayed vegetable matter, rubbish, and other unsuitable material within areas to grade to ground level before grading or other earthwork starts. Do not allow material to remain in or on areas to grade.
F. Excavation:
    1. Excavate subsoil required to accommodate building foundations, slabs-on-grade paving and site structures, construction operations.
    2. Excavation cut not to interfere with normal 45-degree bearing splay of foundation.
    3. Grade excavation top perimeter to prevent surface water from draining into excavation.
    4. Hand trim excavation. Remove loose matter.
    5. Remove lumped subsoil, boulders, and rock up to 1/3 cubic yard measured by volume.
    6. Notify Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
    7. Correct unauthorized excavation at no extra cost to Owner.
    8. Correct areas over-excavated by error –at no extra cost to Owner.
    9. Stockpile excavated material in area designated onsite and spread excess material not reused in designated area.

3.2 PREPARE GROUND SURFACE FOR FILLS OR EMBANKMENTS

A. Strip ground surface where placing fill of live, dead, or decayed vegetation, rubbish, debris, and other unsatisfactory material.
B. Construct embankment from suitable material obtained from excavation or borrow, free of roots, rocks larger than 3 inches, debris, and other objectionable material. Supplement excavation deficiencies from a borrow source approved by Engineer. Construct embankment

in uniform horizontal layers not to exceed eight inches of loose depth and compact with suitable equipment to a minimum 90% ASTM D1557/AASHTO T180. Process materials by aeration or watering to bring material to within 2-percent optimum moisture content. Dry layers will not be permitted. Remove and replace soft spots that develop in embankment with suitable material. No payment made for removal of soft spots. Tolerance for embankment grading shall be 0.5 foot plus or minus plan grade..

C. Shape and compact eight inches of upper portion of embankment or excavation to minimum density of 95-percent ASTM D1557/AASHTO T180 and finish within a tolerance of 0.5 inch in 10 feet. Protect and maintain finished subgrade in satisfactory condition until covered by succeeding construction.

3.3 COMPACTION AND MOISTURE CONTROL

A. Notify Engineer when compaction is achieved and allow 24 hours for scheduling of test. Before taking subgrade density test, test entire subgrade by proof-rolling using a pneumatic roller weighing not less than 50,000 lbs. gross with tire pressure not less than 110 psi. Remedy any soft spots, pumping, or other evidence of weakness before density tests. Proof roll in presence of Engineer or Owner representative.

3.4 OVER EXCAVATION

A. Backfill and compact areas of over excavation as necessary and at no additional cost to Owner.

3.5 MATERIAL DISPOSAL

A. Stockpile excavated material in area approved onsite and remove excess material not reused and waste from site.

END OF SECTION

SECTION 31 23 16 – EXCAVATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes excavating for site improvements.
B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 23 23.13 “Backfill.”
   3. Section 32 11 50 "Flexible Base Course."

1.2 FIELD MEASUREMENTS

A. Verify survey benchmark and intended elevations for Work are as indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

A. Identify required lines, levels, contours, and datum locations.
B. Locate, identify, and protect utilities that remain from damage.
C. Notify utility company to locate utilities.
D. Protect plant life, lawns, and other features remaining as a portion of final landscaping.
E. Protect benchmarks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

3.2 EXCAVATING

A. Underpin adjacent structures which may be damaged by excavating work.
B. Excavate subsoil to accommodate construction operations.
C. Compact disturbed load bearing soil in direct contact with foundations to original bearing capacity; perform compaction in accordance with Section 31 23 23.13 “Backfill.”
D. Slope banks with machine to angle of repose or less until shored.
E. Grade top perimeter of excavating to prevent surface water from draining into excavation.
F. Hand trim excavation. Remove loose matter.
G. Remove lumped subsoil, boulders, and rock.
H. Notify Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
I. Correct areas over excavated –as necessary.
J. Stockpile excavated material in area designated.

3.3 EXCAVATING FOR CONCRETE CURB AND GUTTER

A. Excavate for curb, gutter, and combined curb and gutter with subgrade excavation for street. Street subgrade shall extend from 6 inches back of curb to 6 inches back of curb and be

compacted for full width to minimum 95-percent ASTM D1557/AASHTO T-180, ±2 percent optimum moisture content.

B. Where subgrade is more than 3 inches below bottom of curb, fill shall be compacted base course constructed from 6 inches back of curb to 6 inches back of curb as specified in Section 32 11 50 "Flexible Base Course."

3.4 EXCAVATING FOR DRIVEWAYS AND ALLEY RETURNS

A. Excavate as for streets and curbs. Compact subgrade for all driveways and alley returns to 95-percent ASTM D1557/AASHTO T-180, ±2 percent optimum moisture content for 8-inch depth.

B. Driveways for single family residences and property used for two family residential purposes (duplexes) may be placed on compacted subgrade. All other driveways shall be considered commercial driveways and constructed on 6 inches of flexible base conforming to Section 32 11 50 "Flexible Base Course."

3.5 EXCAVATING FOR CONCRETE VALLEY GUTTERS, CENTER DRAINS AND DRAINWAYS

A. Subgrade excavation preparation and compaction and flexible base shall be same as specified for street construction. Construct all drainage structures within roadway on flexible base so thickness of concrete slab plus base is equal to thickness of hot-mix asphaltic concrete surface plus base.

3.6 EXCAVATING FOR SIDEWALKS

A. Excavate for sidewalk with street excavation where applicable. Exercise care in excavating for sidewalks. Any other excavation or any fill required for sidewalks must be brought to grade in lifts not to exceed 2 inches and thoroughly tamp. Compact subgrade for sidewalks to at least the density of adjacent soil or 85-percent ASTM D1557/AASHTO T-180 ±2 percent optimum moisture content, whichever is greater.

B. When sidewalk is to be constructed on embankment, fill must extend at least 3 feet beyond edge of the sidewalk.

3.7 EXCAVATING FOR CONCRETE RIP RAP

A. Take care not to over excavate for rip rap. Compact subgrade for rip rap to minimum density of adjacent undisturbed soil or 85-percent ASTM D1557/AASHTO T-180 ±2 percent moisture content, whichever is greater.

3.8 FIELD QUALITY CONTROL

A. Section 01 40 00 “Quality Requirements” for field inspection and testing.

B. Provide for visual inspection of bearing surfaces.

3.9 PROTECTION

A. Prevent displacement or loose soil from falling into excavation; maintain soil stability.

B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.

END OF SECTION

SECTION 31 23 23.13 – BACKFILL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Foundation perimeter and site structure backfilling to subgrade elevations.
   2. Site filling and backfilling.
   3. Fill under slabs-on-grade and paving.
   4. Consolidation and compaction.
   5. Fill for over-excavation.

B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 03 30 00 “Cast-in-Place Concrete.”
   3. Section 31 20 00 "Earth Moving."
   4. Section 31 23 16 "Excavation."
   5. Section 32 11 50 "Flexible Base Course."
   6. Division 33 Specification Sections apply to Work of this Section.

1.2 REFERENCES

A. ANSI/ASTM C136: Method for Sieve Analysis of Fine and Coarse Aggregates.
B. ANSI/ASTM D698: Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb. Rammer and 12-inch Drop.
C. ANSI/ASTM D1556 Test Method for Density of Soil in Place by the Sand-Cone Method.
D. ANSI/ASTM D1557: Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. Rammer and 18-inch Drop.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 “Submittal Procedures.”

PART 2 - PRODUCTS

2.1 FILL MATERIALS

A. Type A: Structural Fill - Types GW, GM, GC, GP, SW, SP, and SM with a PI between 5 and 12 and free of organic materials and rocks, lumps, or other items larger than 2 inches.
B. Type B: Ordinary Fill - Types GW, GM, GC, SW, SP, SM, SS, CL or CH with a PI between 5 and 18 and free of organic materials and rocks, lumps or other items larger than 2 inches.
C. Type C: Sand - Natural river or bank sand; free of silt, clay, loam, friable or soluble materials, or organic matter; graded in accordance with ANSI/ASTM C136.
D. Concrete: Structural concrete conforming to Section 03 30 00 “Cast-in-Place Concrete,” except with a compressive strength of 2500 psi and a minimum cement ratio of four sacks/yard.
E. Flexible Base: Conforming to Section 32 11 50 "Flexible Base Course."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify fill materials to be reused are acceptable by testing and analysis.

3.2 PREPARATION

A. Compact base course/subgrade as specified in Sections 31 23 16 "Excavation" and 31 20 00 "Earth Moving."
B. Cut out soft areas of subgrade not capable of in situ compaction. Backfill with Type B fill and compact to density equal to or greater than requirements for subsequent backfill material.

3.3 MISCELLANEOUS BACKFILLING

A. Backfill areas to contours and elevations with unfrozen materials.
B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
C. Type A and B Fill: Place and compact materials in continuous layers not exceeding 8 inches compacted depth.
D. Type C Fill: Place and compact material in continuous layers not exceeding 4 inches compacted depth.
E. Employ a placement method that does not disturb or damage utilities in trenches.
F. Maintain ± 2 percent optimum moisture content of backfill materials to attain required compaction density.
G. Slope grade away from building minimum 2 inches in 10 feet, unless noted otherwise.
H. Make grade changes gradual. Blend slope into level areas.
I. Spread surplus backfill materials in designated areas.
J. Leave fill material stockpile areas completely free of excess fill materials.

3.4 BACKFILL FOR CONCRETE STRUCTURES WITHIN PAVED AREA OF STREETS

A. Structures constructed in previously paved areas shall have sufficient surface removed along with base and subgrade where necessary to set full face forms for concrete. As soon as forms are removed, remove all loose material from form trench and fill trench to base level with Portland cement stabilized backfill material consisting of two sacks Portland cement to 1 cubic yard of base course material or 1 cubic yard "blow sand." When cement stabilized backfill cures, saw cut pavement edge to provide true and straight lines and restore pavement to original or revised grade using hot-mix asphaltic concrete conforming to specifications.

3.5 BACKFILL BEHIND CURBS AND ALONG SIDEWALKS

A. Backfill behind curbs and along sidewalks to be grassed shall use good topsoil free of caliche, rocks, clods, lumps, debris, and other objectionable material. Compact backfill to minimum density of undisturbed adjacent soil, but not less than 85-percent ASTM D1557/AASHTO T-180 ±2-percent optimum moisture content.
B. Construct backfill behind curbs and along sidewalks to receive paving to conform to base and subgrade of adjacent paving and compact to 95 percent ASTM D1557/AASHTO T-180 ±2-percent optimum moisture content. Contractor may elect to backfill to top of base with two sack cement stabilized backfill.

C. In undeveloped areas and areas where no sidewalks exist, slope from back of curb to a maximum height of 1/4 inch per foot rise from top of curb to property line on a straight-line grade. Minimum elevation at property line shall be top of curb elevation.
D. In deeper cut areas, slope paving may be required. When slope paving required, construct to lines and grade shown on plans. Backfill and shaping beyond slope paving shall be in accordance with applicable portions of specifications.

3.6 TOLERANCES

A. Top Surface of Backfilling: ±1 inch from required elevations.

3.7 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Section 01 40 00 "Quality Requirements."
B. Tests and analysis of fill material will be performed in accordance with ASTM D1557 or AASHTO T-180 and with Section 01 40 00 "Quality Requirements."
C. Compaction testing will be performed in accordance with ASTM D1557 or AASHTO T-180 and with Section 01 40 00 "Quality Requirements."
D. If tests indicate Work does not meet specified requirements, remove Work, replace, and retest at no cost to Owner.
E. Frequency of Tests: One test for every lift every 300 linear feet, or as specified by Engineer.
F. Proof roll compacted fill surfaces under slabs-on-grade and paving.

3.8 PROTECTION OF FINISHED WORK

A. Protect finished Work under provisions of Section 01 50 00 "Temporary Facilities and Controls."
B. Recompact fills subjected to vehicular traffic.

END OF SECTION

SECTION 31 41 10 - TRENCH SAFETY SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Trench safety systems for trench excavations greater than 5 feet deep. All work performed under this Section shall also comply with OSHA Part 1926, Subpart P and all state and local codes.
   2. Contractor shall be responsible for complying with requirements of Specifications, Drawings, and all applicable codes. Contractor shall immediately notify Engineer of any unforeseen field conditions which might affect integrity of trench safety system.
   3. Alternative methods of trench safety may be submitted for Engineer approval; however, alternative methods will not be reviewed or approved prior to bid opening.

B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.

1.2 SUBMITTALS

A. Provide detail drawings for proposed trench safety systems. Clearly identify where each system is proposed for use and type of system to be used.

B. Trench Boxes: Submit manufacturer standard data sheet and Certificate of Compliance signed by a registered engineer stating maximum allowable depth for given design pressure for each type of trench box proposed for use.

C. Alternative Systems: If alternative systems composed of steel, aluminum, wood, or combination of materials are proposed, submit design calculations signed by registered engineer showing all member properties, design strengths, and any stress increases used with justification for use.

D. Trench excavations cannot be started until trench safety systems have been submitted and approved by Engineer as specified.

1.3 QUALITY ASSURANCE

A. Trench safety systems shall be designed based on actual field conditions. Contractor shall review and determine field conditions for Project.

B. Work shall be performed by forces having at least two years' experience with similar types of trench safety systems. All prefabricated items used in trench safety systems shall be manufactured by a company with at least two years' experience in fabricating items.

C. Contractor shall be responsible for complying with all trench safety requirements and for safety of trenches and excavations.

PART 2 - PRODUCTS

2.1 GENERAL

A. Provide suitable materials capable of withstanding imposed loads without excessive deflections. Materials shall be clean, free of rust, holes, knots, and other defects.

B. Steel shall be of type and thickness as required by design and with minimum yield stress of F_y = 36000 psi.
C. Aluminum Type 6061-T6, thickness as required by design.
D. Wood in contact with earth to be pressure-treated soft woods or untreated hardwoods.
E. Wood not in contact with earth to be soft or hardwood as required by design.

PART 3 - EXECUTION

3.1 JOB CONDITIONS

A. Prior to starting trench excavations, Contractor shall examine all site conditions and note any conditions in existing pavements, structures, and other items which may be adversely affected by trenching operations. Prepare a written list of all such conditions and submit list to Engineer. During trenching operations, note any changes which occur to existing pavements or structures and submit written report to Engineer of all such changes.

3.2 EXISTING UTILITIES

A. Prior to starting trench excavations, chart and field locate all existing utilities. Notify owners of all utilities of work to be performed. Protect all existing utilities from damage. Provide additional support for utility lines which cannot span trench width. Do not interrupt existing services without written approval by Engineer and utility owner.

3.3 TRENCHING PROCEDURES

A. Provide shoring systems in accordance with the submitted design to adequately resist earth pressures indicated on the drawings.
B. Proceed with work in an orderly fashion. Install trench bracing systems as soon as possible after opening trenches. Do not allow workers in trench prior to installing trench bracing systems.
C. Backfill trenches as soon as possible after completion of work.
D. Stockpile excavated materials at three feet away from edge of trench.
E. Maintain barricades and signage as required by state and local codes to protect open excavations.
F. Do not allow surface water to enter excavations. Properly grade areas adjacent to trench excavations to control surface drainage away from excavations. Excavations which must remain open during periods of rainfall shall be covered with suitable material to prevent accumulations of water in excavation.
G. If cut back method is employed, maintain a clear distance of three feet from edge of cut to avoid allowing loose material to enter trench.
H. Do not operate heavy equipment except for trench digging equipment within 20 feet of edge of excavation.

END OF SECTION

SECTION 32 01 17.10 - REMOVING AND REPLACING ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes labor, materials, and equipment required to make cuts in existing asphalt paving, remove existing pavement, and replace pavement as specified herein and shown on Contract Drawings.
B. Related Sections:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Division 03 Specification Sections apply to Work of this Section.
   3. Division 33 Specification Sections apply to Work of this Section.

1.2 REFERENCED STANDARDS

A. TxDOT Item 300 – Asphalts, Oils, and Emulsions
B. TxDOT Item 301 – Asphalt Antistripping Agents
C. TxDOT Item 340 – Dense-Graded Hot-Mix Asphalt (Small Quantity)

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 “Submittal Procedures”.
B. Job-Mix-Formula containing:
   1. Combined aggregate gradation, source, specific gravity, and percent of each material used.
   2. Asphalt binder content and aggregate gradation
   3. Target laboratory-molded density (or Ndesign level when using the SGC);
   4. Results of all applicable tests.
   5. Mixing and molding temperatures.
   6. Signature of person that performed the design.
   7. Date mixture design was performed.
   8. Unique identification number for the mixture design
C. Material Test Reports.
D. Qualification Data: Submit qualifications for product manufacturers.

PART 2 - PRODUCTS

2.1 GENERAL

A. Furnish uncontaminated materials of uniform quality to meet requirements of Contract Documents.
B. Notify Engineer of all material sources and before changing any material source or formulation. Contractor shall verify specification requirements shown herein are met when Contractor makes a source or formulation change, and may require a new laboratory mixture design, trial batch, or both. Engineer may sample and test project materials at any time during project to verify compliance with Contract Documents.

2.2 AGGREGATE

A. Unless otherwise specified in Contract Drawings, use a Type D gradation for asphalt paving.
B. Aggregate quality requirements, gradation, and VMA requirements shall meet all the requirements of TxDOT Item 340.
C. Aggregate properties shall be tested in accordance with TxDOT Item 340, test reports shall be provided by Contractor to Engineer.

2.3 ASPHALT BINDER

A. Unless otherwise specified in Contract Drawings, asphalt binder shall be Type B PG 70-22 or approved equal.
B. Contractor may submit for engineer approval a substitute PG binder, if substitute PG binder and mixture made with substitute PG binder meet requirements of Section 2.8 of TxDOT Item 340.

2.4 TACK COAT

A. Furnish RC-250 cut back asphalt, RS2h emulsified asphalt, or approved equal for tack coat binder per TxDOT Item 300. Specialized or preferred tack coat materials may be allowed or required when shown on Contract Drawings. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
B. Contractor to provide at least one sample of tack coat binder per Tex-500-C, Part III, and test to verify compliance with TxDOT Item 300.

2.5 CONCRETE

A. Furnish a flowfill mixture composed of type III Portland cement, pea gravel and sand with a cement content of 2 sacks per cubic yard of flowfill.

PART 3 - EXECUTION

3.1 EXISTING PAVEMENT REMOVAL

A. Wherever necessary to make cuts in existing asphalt pavement make cuts to cause the least amount of damage, to adjoining surfaces. In removing asphalt pavement, saw-cut surface along each side of trench ahead of trenching machine, width to be removed to be sufficient to allow a shoulder on each side of trench, as shown on Contract Drawings, and surfacing/base removed with trenching machine as trench is excavated. Tunneling/boring required under curb and gutter.

3.2 CONCRETE CAP

A. After completion of the backfill in areas where an asphalt type of paving has been removed and after sufficient time has passed for ponding water to leach out of backfill material a 20-inch minimum concrete cap shall be placed to the widths and details as specified in the Contract Drawings.
B. The 20-inch minimum concrete cap shall be placed in the trenched-out area and the surface of the concrete struck off to the bottom of the proposed HMAC pavement surface course.

Concrete shall be given a rough but even finish with a wood float. HMAC pavement surfacing may be applied 24 hours after completing the concrete placement.

3.3 ASPHALT PAVING

A. Examination
   1. Proceed with paving only after unsatisfactory conditions are corrected.
   2. Surface shall be clean and free of loose dirt, rock. Or any other foreign matter.

B. Weather Conditions
   1. Place mixture when the roadway surface temperature is at or above 60 degrees F unless otherwise approved. Place asphalt paving only when weather conditions and moisture conditions of the roadway surface are suitable as determined by Owner's Representative.
   2. Contractor shall not perform paving operations when the ambient temperature is 45 degrees F and falling.

C. Tack Coat
   1. The existing surfacing shall be sawcut back 3-inches from the edge of the concrete cap prior to placing the tack coat.
   2. Verify surface is clean before placing tack coat. Place at a rate of 0.10-0.15 gallons of residual asphalt per square yard of surface area. Apply a uniform tack coat at the specified rate unless otherwise directed apply tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply a thin, uniform tack coat to all contract surfaces of curbs, structures, and all joints. Allow adequate time for emulsion to break completely before placing any material Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Roll tack coat with a pneumatic-tire roller to remove streaks and other irregular patterns when directed.

D. Asphalt Placement
   1. Place asphalt mixture to meet the typical section requirements and widths shown in the Contract Drawings.
   2. As the material is placed it shall be thoroughly raked and leveled. After surfacing has been placed, roll with a suitable 8-ton, or larger flat wheel roller. Care shall be taken to replace the pavement to the proper cross-section and elevation. In general, the new surfacing, after initial rolling, shall be 1/4- to 3/8-inch above the old surfacing to allow for further compaction. If, after rolling, there are any high or low spots, such places shall be corrected by loosening the surface and then adding or removing the proper amount of asphalt paving and then recompacting the surface.

3.4 CLEANUP

A. After completion, all debris resulting from construction shall be cleaned up and removed for the Site. Areas disturbed during construction, shall be raked as required and left in clean and neat condition. Gutters shall be cleaned of all dirt, aggregate, or other material which would clog gutter. Entire premises of work shall be left clean, satisfactory to Owner Representative, and all costs of cleanup borne by Contractor.

END OF SECTION

SECTION 32 11 50 - FLEXIBLE BASE COURSE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes excavating, crushing, hauling, and spreading base material then wetting, compacting, and shaping it to form a flexible base course to lines, grades, and typical cross section shown on Contract Drawings and specified herein.
B. Contractor shall furnish all materials, equipment, tools, labor, superintendence, and incidentals necessary to complete Work.
C. Related Requirements:
   1. Division 01 Specification Sections apply to the Work herein.
   2. Division 31 Specification Sections apply to the Work herein.
   3. Division 32 Specification Sections apply to the Work herein.

1.2 QUALITY CONTROL

A. Engineer shall direct, required tests, and reserves, the right to adjust, modify, or waive required test. The following list is a guideline for number of tests required for a construction sequence:
   1. Base Material: Retest of gradation, liquid limits, and plasticity index, for each 10,000 square yard of base material laid.
   2. Triaxial Test: A minimum one test shall be required for each Project.
   3. Compaction Test: One field density test will be required for each 1,000 square yards of base material laid.

1.3 REFERENCES

A. TxDOT Item 247 – Flexible Base.
B. TxDOT DMS 11000 – Evaluating and Using Nonhazardous Recyclable Materials Guidelines.
C. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
D. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00 "Submittal Procedures."

PART 2 - PRODUCTS

2.1 AGGREGATE

A. Furnish aggregate of the type and grade shown on the Contract Drawings and meeting the requirements of the following table. Each source must meet requirements for liquid limit, plasticity index, and wet ball mill for the grade specified as shown in the table below. Do not use additives, such as but not limited to lime, cement, or fly ash to modify aggregates to meet requirements of table unless shown on Contract Drawings.

Property	Test Method	% Passing
Sieve size	ASTM C136	
2-1/2”		0
1-3/4”		100
7/8”		65-90
3/8”		50-70
#4		30-60
#40		15-35
Liquid Limit, % Max	ASTM D4318	30
Plasticity Index, Max	ASTM D4318	10
Plasticity Index, min		As shown on Contract Drawings
Wet ball mill, % Max	Tex-116-E	40
Wet ball mill, % Max increase passing the #40		20
Min compressive strength, psi	Tex-117-E	
Lateral pressure 0 psi		
Lateral pressure 3 psi		90
Lateral pressure 15 psi		175

B. Material Tolerances
   1. Engineer may accept material if no more than 1 of the 5 most recent gradation tests has an individual sieve outside the specified limits of the gradation.
   2. When target grading is required by the Contract Drawings, no single failing test may exceed the master grading by more than 5 percentage points on sieves No. 4 and large or 3 percentage points on sieves smaller than No. 4.
   3. Engineer may accept material if no more than 1 of the 5 most recent plasticity index tests is outside the specified limit. No single failing test may exceed the allowable limit by more than 2 points.

C. Furnish material type specified on Contract Drawings per Type E, Caliche.

2.2 WATER

A. Furnish water free of industrial wastes and other objectionable matter.

2.3 MATERIAL SOURCES

A. Exposed the vertical faces of all strata of material proposed for use when non-commercial sources are used. Secure and process the material by successive vertical cuts extending through all exposed strata, when directed.

PART 3 - EXECUTION

3.1 GENERAL

A. Construct each layer uniformly, free of loose or segregated areas, and with the required density and moisture content. Provide a smooth surface that conforms to the typical sections, lines, and grades shown on the Contract Drawings.
B. Haul approved flexible base in clean trucks. Deliver the required quantity as necessary.
C. No base material may be dumped on any subgrade until tested and approved by Engineer.

3.2 PREPARATION OF SUBGRADE OR EXISTING BASE

A. Remove or scarify existing surfacing as shown on Contract Drawings. Shape subgrade or existing base to conform to the typical sections shown on the Contract Drawings.
B. When new base is required to be mixed with existing base, deliver, place, and spread the new flexible base in the required amount. Manipulate and thoroughly mix the new base with existing material to provide a uniform mixture to the specified depth before shaping.
C. Proof roll the base, before pulverizing or scarifying when shown on the Contract Drawings. Correct soft spots immediately.

3.3 PLACING

A. Spread and shape flexible base into a uniform layer with an approved spreader the same day as delivered unless otherwise approved by Engineer. Construct layers to the thickness shown on the plans. Maintain the shape of the course. Control dust by sprinkling. Correct or replace segregated areas as directed at no additional expense to the Owner.
B. Place successive base courses and finish courses using the same construction methods required for the first course.
C. Minimum thickness of any one compacted course shall be 3 inches. Maximum thickness of any one compacted course shall be 8 inches.

3.4 COMPACTION

A. Compact using density control unless otherwise shown on the plans. Multiple lifts are permitted when shown on the Contract Drawings or Engineer approved. Bring each layer to the moisture content directed. When necessary, sprinkle the material.
B. Begin rolling longitudinally at the sides and proceed towards the center, overlapping on successive trips by at least 1/2 the width of the roller unit.
C. Rework, recompact, and refinish material that fails to meet or that loses required moisture, density, stability, or finish requirements before the next course is placed or the project is accepted. Continue work until specification requirements are met. Perform the work at no additional expense to the Owner.
D. Before final acceptance, Engineer will select the locations of test and measure the flexible base depth in accordance with Tex-140-E. Correct areas deficient by more than 1/2-inch thickness by scarifying, adding material as required, reshaping, recompacting, and refinishing at the Contractor’s Expense.
E. Compact to at least 95 percent maximum dry density determined by ASTM D1557/AASHTO T-180, unless otherwise shown on Contract Drawings. Maintain moisture during compaction within ±2 percent of optimum moisture content. Do not achieve density by drying material after compaction.

F. Prime finished base as soon after finishing as practical and protect until hot-mix asphaltic concrete surface is applied. In no case will prime be applied until finished base is approved by Engineer.

3.5 FINISHING

A. Immediately correct all irregularities, depressions, or weak spots which develop during compaction, by scarifying affected areas, adding, or removing material as required, and reshaping and recompacting by sprinkling and rolling. Immediately prior to placing surfacing, check base for grade and cross section, and correct any deviation more than 1/4-inch from grade or true cross section. Contractor shall set blue tops set to finished base elevations, to check base for proper grade and elevation.

B. If base course is opened to traffic before applying surfacing, base shall be satisfactorily maintained by wetting, blading, and rolling until wearing surface is placed thereon.

C. Perform finish tolerance test at Contractor expense using a 10-foot rolling straight edge at direction of Engineer or Owner representative. When required, test shall consist of checking on path in each lane with rolling straight edge.

END OF SECTION

SECTION 33 05 07.13 – UTILITY DIRECTIONAL DRILLING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes PVC pipe, including standards for dimensionality, testing, quality, , safe handling, storage and installation of pipe by horizontal directional drilling (HDD), directional boring, or guided boring.

B. Scope of Work:
   1. Contractor shall provide acceptable restrained joint PVC pipe and meet all testing and material properties as described herein for installation by HDD.
   2. Contractor responsible for all installation processes and procedures associated with installation by HDD per this specification.

C. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Division 03 Specification Sections apply to Work of this Section.
   3. Division 31 Specification Sections apply to Work of this Section.
   4. Section 33 14 13 “Public Water Utility Distribution Piping.”

1.2 REFERENCES

A. Restrained joint PVC pipe installed by HDD method shall conform with:
   1. AWWA C900 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 in. Through 60 in.
   2. AWWA C605 – Underground Installation of Polyvinyl Chloride (PVC) and Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe and Fittings
   3. AWWA C110 – Ductile Iron and Gray Iron Fittings
   4. AWWA C111 – Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
   5. AWWA M23 – PVC Pipe – Design and Installation
   6. ASTM D2774 – Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
   7. ASTM D2737 – Standard Specification for Polyethylene (PE) Plastic Tubing
   8. ASTM D2837 – Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
   9. ASTM D3139 – Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
   10. ASTM A536 – Standard Specification for Ductile Iron Castings
   11. ASTM F477 – Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
   12. NSF/ANSI 61 – Drinking Water System Components – Health Effects
   13. AASHTO – LRFD Bridge Design Construction Specifications
   14. Uni-Bell PVC Pipe Association – Handbook of PVC Pipe Design and Construction

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 “Submittal Procedures.”

B. Product data required on pipe
   1. Pipe size.
   2. Pipe standard.

3. Dimension ratios and pressure ratings.
4. Lay length.
5. Color.
6. Recommended minimum bending radius.
7. Recommended maximum safe pull force.
8. Work plan and information required from Contractor/HDD Contractor, also supplied to pipe supplier, if requested:
    a. Work plan includes for each HDD installation, any excavation locations and dimensions, interfering utilities, bore dimensions and locations including bend radii used, and traffic control schematics.
    b. Project safety and contingency plan includes but not limited to drilling fluid containment and cleanup procedures, equipment and plan for compromised utility installations including electrical and power lines, water, wastewater and any other subsurface utility in the area.
    c. HDD schedule identifying daily work hours and dates for each installation.

C. Post-Construction Submittals. As-recorded data required from Contractor to Owner upon request:
1. Approved datalogger device reports.
2. As-recorded Information:
    a. As-recorded plan and profile reflects actual installed alignment and horizontal offset from baseline and depth of cover.
    b. Reference and show all fittings, valves, or other appurtenances.
    c. Daily project log and tracking log sheets, if used, are provided. Tracking log sheet data, if needed, includes all that apply including inclination, depth, azimuth, and hydraulic pull-back and rotational force measured.

1.4 REGULATORY REQUIREMENTS

A. Conform to applicable code for piping and component requirements.
B. All applicable TCEQ regulations shall be strictly adhered to.

1.5 CERTIFICATION

A. Certifications properly executed by manufacturer shall be furnished to Engineer showing compliance to specification requirements and standards sighted herein. Test data from tests performed shall be provided as requested by Engineer.

1.6 INSPECTION

A. Engineer and representatives shall have access to all phases of work. Manufacturer and Contractor shall provide proper facilities for access and inspection. Material, fabricated parts, and pipes discovered defective, or do not conform to Specification requirements, will be subject to rejection at any time prior to final acceptance of pipe.

PART 2 - PRODUCTS

2.1 GENERAL

A. Products shall be per Section 33 14 13 “Public Water Utility Distribution Piping.”

2.2 DRILLING SYSTEM EQUIPMENT

A. Directional drilling equipment, at minimum, consists of directional drilling rig of sufficient capacity to perform bore(s) and pull-back of pipe(s), drilling fluid mixing and delivery system of sufficient capacity to successfully complete crossing, guidance system to accurately guide boring operations, and trained and competent personnel to operate system. All equipment shall be in good, safe, operating condition with sufficient supplies, materials, and spare parts on hand to maintain system in good working order for Project duration. All required equipment included in emergency and contingency plan as submitted per specifications.

B. Drilling Rig
   1. Directional drilling machine consists of a hydraulic powered system to rotate, push, and pull drill pipe while delivering pressurized fluid mixture to drill head. Machine anchored to withstand pulling, pushing, and rotating forces required to complete Project.
   2. Drilling rig hydraulic system shall be of sufficient pressure and volume to power drilling operations. Hydraulic system shall be free from leaks.
   3. Drilling rig has system to monitor pull-back hydraulic pressure during pull-back operations.

C. Drill Head
   1. HDD equipment produces stable fluid-lined tunnel with steer-able drill head and any subsequent pre-reaming heads.
   2. System must control depth and direction of drilling operation.
   3. Drill head contains all necessary cutters and fluid jets for operation, and appropriate design for ground medium drilled.

D. Drilling Fluid System
   1. Drilling Fluid (Drilling Mud)
      a. Drilling fluid composed of clean water and appropriate additive(s) for fluid to used. Water to be from clean source and meet mixing requirements of mixture manufacturer(s).
      b. Mix water and additives thoroughly to assure absence of clumps or clods. No hazardous additives may be used.
      c. Maintain drilling fluid at viscosity sufficient to suspend cuttings and maintain integrity of bore wall(s).
      d. Dispose drilling fluid off-site per local, state, and federal requirements and/or permit conditions.
      e. No additional chemicals or polymer surfactants allowed to add to drilling fluid unless submitted per specification.
   2. Mixing System
      a. Drilling fluid mixing system shall be of sufficient size to mix and deliver drilling fluid for Project.
      b. Mixing system shall ensure thorough mixing of drilling fluid. Drilling fluid reservoir tank sized for adequate fluid storage.
      c. Mixing system continually agitates drilling fluid during drilling operations.
   3. Drilling Fluid Delivery and Recovery System
      a. Drilling fluid pumping system has minimum capacity to supply drilling fluid per drilling equipment pull-back rating at constant required pressure.
      b. Delivery system has filters or other appropriate in-line equipment to prevent solids from pumping into drill pipe.

c. Contain used and spilled drilling fluid during drilling operations and properly dispose. Maintain spill containment measures around drill rigs, drilling fluid mixing system, entry and exit pits, and drilling fluid recycling system (if used) to prevent spills into surrounding environment. Place pumps, vacuum truck(s), and/or storage of sufficient size to contain excess drilling fluid.
d. Use a closed-loop drilling fluid and drilling fluid cleaning system to whatever extent practical, depending upon project size and conditions. Do not reuse drilling fluid that escaped containment in drilling system.

E. Drilling Control System
1. Calibrating electronic detection and control system verified before start of bore.
2. Drilling head shall be remotely steerable by electronic or magnetic detection system. Drilling head location monitored in three dimensions:
a. Offset from baseline,
b. Distance along baseline, and
c. Depth of cover.
3. Point of head rotation also monitored.
4. For gravity application and on-grade drilling, use sonde/beacon or approved equipment applicable for grade increments of 1/10 of 1 percent.

2.3 PIPE PULL HEADS

A. Utilize pipe pull heads that always employ positive through-bolt design assuring smooth wall against pipe cross-section .
B. Pipe pull heads specifically designed for use with fusible PVC pipe as recommended by pipe supplier.

2.4 PIPE ROLLERS

A. Pipe rollers, if required, shall be of sufficient size to fully support pipe weight during handling and pullback operations.
B. Use enough rollers and spacing, per pipe supplier guidelines to assure adequate support and excessive sagging of product pipe.

PART 3 - EXECUTION

3.1 MEASUREMENT AND PAYMENT

A. Potable Water Mains
1. Measurement provided by Contractor and verified by Owner representative.
2. Payment for installation of potable water main will be on a linear foot basis. All items necessary to completely install pipe are included in this unit price.

3.2 GENERAL

A. All pipe and accessories for work specified herein shall be unloaded, handled, laid, jointed, tested for defects and for leakage in the manner herein specified.
B. Coordinate delivery storage, and delivery schedule with Owner representative.
C. Pipe Bending and Joint Angular Deflection shall meet requirements of AWWA C605 and manufacture specifications. The more stringent shall apply to Project.
D. Make connections between new work and existing work, where required, using proper

transition sleeves and fittings to suit actual conditions. Additional bends may also be necessary to provide minimum pipe separations as required by TCEQ. Provide these fittings, special sleeves, and bends after verification from Engineer. When necessary to interrupt service to existing facilities to make connection to an existing line, make connections as designated by Owner at no additional cost to Owner.

E. Contractor is responsible for all material he furnishes and shall replace, at own expense, all material found defective in manufacture or became damaged in handling after delivery.

F. Storage, Handling Pipe, and Accessories

1. Unload all pipe, fittings, and other accessories shall, unless otherwise directed at point of delivery. Haul to and distribute at site of work. In loading and unloading, lift by hoists/slid or roll on skidways to avoid shock or damage to materials. DO NOT drop. Pipe handled on skidways must not be skidded or rolled against pipe already on the ground.
2. Place pipe, fittings, and accessories along site to keep as free as possible from dirt, sand, mud, and other foreign matter.
3. When prolonged exposure to direct sunlight is anticipated, cover PVC pipe and accessories with opaque material while still permitting adequate air circulation above and around the pipe.

3.3 DRILLING OPERATIONS

A. General

1. Bore path and alignment as indicated in Contract Documents. Bore path may be modified based on field and equipment conditions. Entry and exit locations and control-point elevations maintained as indicated in Contract Documents.
2. Bend radii shown in Contract Documents are minimum allowable radii and not reduce.

B. Location and Protection of Underground Utilities

1. Correct location of all underground utilities that impact HDD installation, is Contractor responsibility, regardless of locations shown on Contract Drawings or previous surveys completed.
2. Contact utility location and notification services before construction.
3. Positively identify all existing lines and underground utilities including exposing facilities located within envelope of possible impact of HDD installation as determined for Project-specific site conditions. Contractor and HDD system operator hold responsibility to determine this envelope of safe offset from existing utilities. This includes but not limited to soil conditions and layering, utility proximity and material, HDD system and equipment, and foreign subsurface material.

C. Site Location Preparation

1. Grade of fill Work site, as indicated on Contract Drawings, to provide level working area. No alterations beyond required for operations are to be made.
2. Confine all activities to designated work areas.

D. Drilling Layout and Tolerances

1. Accurately survey drill path with entry and exit areas placed in appropriate locations where indicated on Contract Drawings. If using magnetic guidance system, survey drill path for any surface geomagnetic variations or anomalies.
2. Instrumentation provided and maintained all times to accurately locate pilot hole, measure drill-string axial and torsional loads, and measure drilling fluid discharge rate and pressure.
3. Drill entry and exit areas, not to exceed bending limitations of pipe as recommended by pipe supplier.

E. Pilot Hole Bore
   1. Drill pilot hole along bore path. If pilot bore does deviate from bore path, pull back and redrill from location along bore path before deviation.
   2. Limit curvature in any direction to reduce force on pipe during pull back. Minimum radius of curvature shall be no less than specified by pipe supplier and indicated on Contract Drawings.

F. Reaming
   1. After successfully completing pilot hole, ream bore hole to diameter meeting requirements of pipe installed:

Nominal Pipe Diameter	Bore Hole Diameter
<8 inches	Pipe Diameter +4 inches
8 to 24 inches	Pipe Diameter x 1.5
>24 inches	Pipe Diameter +12 inches

   2. Use multiple reaming passes at Contractor discretion and conform to specification.
   3. In the event of drilling fluid fracture, returns loss, or other loss of drilling fluid, restore any damaged property to original condition and clean area near damage/loss.

3.4 PIPE PULL-BACK AND INSERTION

A. Cartridge load and assemble pipe before insertion.
B. Handle pipe to not over-stress pipe before insertion. Limit vertical and horizontal curves so pipe does not bend past pipe supplier minimum allowable bend radius, buckle, or otherwise become damaged. Remove and replace damaged pipe portions.
C. Grade pipe entry area as needed to provide support for pipe and allow free movement into bore hole.
   1. Guide pipe into bore hole to avoid deformation of, or damage to, pipe.
   2. Continuously or partially support PVC pipe on rollers or other Owner- and Engineer-approved friction decreasing implement during insertion, as long as pipe not overstressed or critically abraded before or during installation.
   3. Use a swivel between reaming head and PVC pipe to minimize torsion stress on pipe assembly.
D. Buoyancy modification is at Contractor sole discretion and not exceed pipe supplier guidelines regarding maximum pull force or minimum bend radius of pipe. Damage caused by buoyancy modifications is Contractor responsibility.
E. Once pull-back operations commence, continue operation without interruption until pipe is completely pulled through bore hole.
F. Install pipe not causing upheaval, settlement, cracking, or movement and distortion of surface features. Contractor corrects damages caused by his operations.

3.5 POTABLE WATER MAIN FITTING INSTALLATION

A. Install fittings per Section 33 14 13 “Public Water Utility Distribution Piping.”

3.6 VALVE, TAPPING VALVE, TAPPING SLEEVE, FIRE HYDRANT, AND PIPE REPAIR INSTALLATION

A. Install per Section 33 14 13 “Public Water Utility Distribution Piping.”

3.7 SERVICE CONNECTION INSTALLATION

A. Install per Section 33 14 13 “Public Water Utility Distribution Piping.”

3.8 HYDROSTATIC TESTING

A. Perform per Section 33 14 13 “Public Water Utility Distribution Piping.”

3.9 DISINFECTION

A. Perform per Section 33 14 13 “Public Water Utility Distribution Piping.”

3.10 CLEAN UP

A. After construction work is completed, remove all rubbish, excess materials from excavations, and other debris from site of work. Properly dispose all drilling fluid per specifications and all applicable jurisdictional laws. Replace/repair all affected items (surfacing, landscaping, etc.) to equal or better condition than preconstruction conditions. Cost of cleanup shall be included in bid prices for various units of work.
B. Verify all utilities, structures, and surface features in Project area are sound.

END OF SECTION

SECTION 33 05 07 – TRENCHLESS INSTALLATION OF UTILITY PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes all jacking/boring/tunneling required to install casings or tunnels under highways, streets, or other pipelines. Work shall include excavation and shoring bore pits, removal and disposal of excess materials, and any necessary dewatering. Contractor furnishes all materials, equipment, tools, labor, superintendence, and incidentals, including necessary field welding, to install casings or tunnel liner and accessories as indicated on Contract Drawings and specified herein.

B. Scope of Work:

1. Contractor installs casing pipe or tunnel liner at locations and to lines and grades indicated on Drawings. Casings or tunnel liner shall be sizes indicated on Drawings at minimum, and installed using jacking, boring, or tunneling methods. Contractor holds responsibility, by own geotechnical investigation, to determine if casing or tunnel liner thickness should be increased to prevent bending or excessive deflection as installed.
2. Contractor is responsible for cost of removing, redirecting, modifying, or reinstalling any casing pipe or tunnel liner, including relaying or rerouting carrier pipe, from Contractor not verifying soil conditions at each location. Contractor may refer to geotechnical study, if any; however, it remains Contractor responsibility to determine if additional thickness, beyond specified, is necessary to effectively complete casing or tunnel liner installation. Contractor determines casing thickness based upon intended boring and jacking loads imposed upon casing pipe during installation. Contractor holds responsibility to determine if additional thickness beyond specified is needed to carry overburden pressure on casing or tunnel liner. Contractor installs carrier pipes sizes indicated on Contract Drawings, within casings or tunnel liner, and required casing insulators, end seals, pipe supports, skids, and other incidental features required to complete Work described.
3. Contractor solely responsible for determining soil conditions where casings or tunnel liner are installed and makes such other investigations to obtain information as necessary. Methods and equipment selected by Contractor for construction are to be compatible with soil conditions encountered. Costs of such investigations included in Contractor cost for performing Work.
4. All OSHA regulations and requirements of specific private and governmental agencies under whose facilities casings and pipe are to be installed, apply to these operations.
5. Contractor responsible for protecting facilities, where casings or tunnel liner and pipe installed, for providing protection at excavations and carrying out trench safety procedures per all OSHA regulations required because of these operations.

C. Related Sections:

1. Division 01 Specification Sections apply to Work of this Section.
2. Division 33 Specification Sections apply to Work of this Section.

1.2 REFERENCES

A. Trenchless installation of utility piping shall conform to the following standards:

1. AWWA C206 – Field Welding of Steel Water Pipe
2. AWWA C210 – Liquid Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines

3. AASHTO – LRFD Bridge Construction Specifications
4. ASTM A135 -Standard Specification for Electric-Resistance-Welded Steel Pipe
5. ASTM A139 – Standard Specification for Electric-Fusion (Arc)-Welded Steel Pipe
6. ASTM A568/A568M – Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for
7. API 1104 – Welding of Pipelines and Related Facilities
8. NFPA 70 – National Electrical Code

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 “Submittal Procedures.”
B. Contractor submits for review, complete Working Drawings showing details of proposed method of construction and sequence of operations performed during construction. Plan shows method of jacking, boring, or tunneling, muck removal and disposal, type and method of installation of primary casing, access pit size and construction shoring and bracing, and dewatering methods proposed. Working Drawings sufficiently detailed to allow Engineer to judge whether proposed materials and procedures will meet Contract requirements.
C. Contractor's submittal includes design criteria used and certification that structural design of casing meets design criteria. Casing or tunnel liner shall, at minimum, be able to carry H-20 (and/or E-80) load distributions as specified, as well as jacking or other dead loads, and include appropriate design factor of safety.
D. Submit for review a brief description of quality control methods including:
    1. Method and frequency of survey control.
    2. Example of tunnel daily log.
    3. Instrumentation plan showing location and frequency of monitoring relative to critical structures within zone of active excavation.
    4. Settlement survey plan.
E. When Contractor conducts geotechnical investigations, submit results to Engineer for Owner’s Project record documentation.
F. Submit settlement monitoring plan for review before construction. Plan to identify location of potential settlement points, remedial measures to offset or correct settlement, reference benchmarks, survey frequency and procedures, and reporting formats.
G. Submit pre- and post-construction assessment reports for critical structures and existing utilities; namely, those located within zone of active excavation from proposed casing or tunnel centerline. Include in assessment reports, photos or video of existing damage to structures or utilities near pipeline alignment.
H. Submit readings of all monitoring to Engineer as part of Project documentation.
I. Contractor maintains shift log and makes available to Owner’s representative on request. Shift log shall contain daily rate of advance.
J. Contractor provides engineered shoring system at all bore pit and exit pit locations. Prepare excavation shoring system(s) following these criteria:
    1. Provide drawings and calculations for shoring system used, prepared and signed by professional engineer licensed in Texas, experienced in design of shoring systems.
    2. Perform shoring design per soil characteristics and design recommendations contained in written geotechnical report issued and signed by geotechnical engineer, hired by Contractor for this purpose. Geotechnical engineer to be licensed in Texas.
    3. Contractor provides data on proposed type and size of jacking, boring, or tunneling equipment proposed for use on Project, including guidance systems, method of grade, and alignment control for adjustments.

K. Shop Drawings include equipment pit locations including dimensions, shoring, bracing, traffic protection, dewatering system, ventilation system, and provisions for worker safety, per OSHA requirements.
L. Method of construction shall ensure safety of Work, Contractor employees, public, and adjacent public or private property. Requirements apply for each crossing location since conditions vary for each location. Contractor's method of construction shall consider but not limited to existing soil conditions, adjacent structures, working area, and traffic control.
M. Submit all products proposed for use in accordance with Part 2 of this specification.

1.4 QUALITY ASSURANCE

A. Installation shall be by a competent, experienced contractor/subcontractor. Installation contractor shall have a satisfactory experience record at least two years engaged in similar work of equal scope.
B. Lateral or vertical variation in final position of pipe casing from line and grade established by Engineer permitted only to the extent of 1-inch in 10 feet, if variation shall be regular and only in the direction that will not detrimentally affect function of carrier pipe.

PART 2 - PRODUCTS

2.1 STEEL CASING

A. Casing pipe shall be new ASTM A139 Grade B steel casing excluding hydrostatic test requirements.
B. Casing shall be coated inside and out using a coal tar epoxy or bituminous coating by hot dip method.
C. Casing diameters and thicknesses as shown in Contract Drawings.
D. Bevel casing pipe ends for welding. Beveled edge located on weld side of pipe.

2.2 CASING SPACERS

A. Casing spacers shall be new, stainless steel banded with polymer runners as manufactured by CCI, APS or approved equal.
    1. For 4- to 36-inch carrier pipe, 8-inch-width spacers shall be utilized.
    2. For 36- to 120-inch carrier pipe, 12-inch-width spacers shall be utilized.

2.3 CASING END SEALS

A. Casing end seals shall be new, EPDM or neoprene rubber with stainless steel banding as manufactured by CCI, APS or approved equal.

2.4 PRESSURE GROUT

A. Cement Mortar shall consist of one-part cement to two-parts clean sand with sufficient water to make a thick workable mix.
B. Pressure Grout Mix shall be comprised of 1 cubic foot of cement and 3.5 cubic foot of clean fine sand with sufficient water added to provide a free-flowing thick slurry. If desired to maintain solids in the mixture in suspension, 1 cubic foot of commercial grade bentonite may be added to each 12-15 cubic feet of the slurry.

PART 3 - EXECUTION

3.1 JOB CONDITIONS; PERMITS AND EASEMENT REQUIREMENTS

A. Where work is in the public right-of-way or railroad company right-of-way, secure appropriate permits or easements, unless provided. Observe regulations and instructions of right-of-way owner as to methods of performing work and take precautions for safety of the property and the public. Negotiate and coordinate with right-of-way Owner not less than 5 days before time of his intentions to begin work on the right-of-way.

B. Comply with requirements of permit/easement. If required by right-of-way Owner, obtain Protective Liability Insurance in the amount required by company or other insurance as is specified in permit at no additional cost to Owner. Acquire a permit, agreement, or work order from the right-of-way Owner as required.

C. Construction along roads and railroads shall always be performed so excavated material be kept off roads and railroads, as well as all operating requirements. Construction shall not interfere with operations of roads and railroads.

D. Provide barricades, warning signs, and flagmen when necessary and specified.

E. No blasting allowed. Protect existing pipelines. Verify location and elevation of any pipelines before proceeding with construction and plan construction as to avoid damage to any existing pipelines. Verification of location of existing utilities is Contractor’s complete responsibility.

3.2 CONSTRUCTION PROCEDURES

A. Jacking, boring, or tunneling shall be to limits, lines, and grades shown on Contract Drawings and in approved submittal and utilize methods including due regard for safety of workmen, adjacent structures, utilities, and public. Methods of construction, (boring, jacking, tunneling), at Contractor option subject to approval of Engineer and governing agencies.

B. Furnish all necessary equipment for construction, provide adequate lights, ventilation, signal systems, fire extinguisher, safety equipment, and other equipment required, and maintain such equipment in good repair. Locate equipment powered by combustible fuels at suitable distances from shafts and protect to prevent possibility of explosion and fire in shafts and casing.

C. Be advised of proximity of buildings, structures, roads, and utilities to Work as shown on Contract Drawings. Execute excavating, lining, grouting, and construction of casing or tunnel so ground settlement minimized. Precautions include construction methods and equipment to minimize loss of earth materials at casing or tunnel face and settlement of earth around the casing. Completed casing or tunnel has full bearing against earth and no voids or pockets left in any portion of Work.

3.3 EXCAVATION AND BACKFILL OF ACCESS PITS

A. Do not allow excavation over the limits of the bore as specified. Trench walls of access pits adjacent to the bore face shall be truly vertical. Shore trench walls as necessary to protect workmen, public structures, roadways, and other improvements.

B. Backfill and consolidate excavations within right-of-way and not under surfacing by tamping in 6-inch horizontal layers to 95-percent maximum density as measured by ASTM DD1557, ±2-percent optimum moisture content. Remove surplus material from right-of-way and finish excavation to original grades. Backfill pits immediately after installation of carrier pipe is complete. If carrier pipe not installed immediately after casing pipe installation, right-of-way owner may require access pits be temporally backfilled until installation of carrier pipe.

C. Where seeding or sodding is disturbed by excavation or backfilling operations, replace by seeding or sodding as specified.
D. Dispose excess material in Owner-approved manner with no additional costs to Owner.

3.4 HANDLING CASING PIPE

A. Unload all casing pipe delivered to job site at point of delivery. Haul materials to site of Work and distribute materials, unless otherwise specified. In loading and unloading, lift casing pipe by hoists with slings, slid, or roll on skidways to avoid shock or damage. DO NOT drop materials. Do not skid or roll casing pipe handled on skidways against casing pipe already on the ground. Handle material to avoid damage.
B. Contractor repairs any damage caused to material at own expense.

3.5 CASING PIPE CUTTING

A. Perform casing pipe cutting, where indicated on Contract Drawings or approved/authorized by Engineer, without damaging casing pipe. Cut by approved mechanical cutter. Use wheel cutters where practicable.

3.6 WELDING PROCEDURES FOR CASING PIPE

A. Procedures for welding casing pipe joints established per requirements of American Water Works Association, AWWA Standard C206, latest edition, Section 4.4 – Qualification of Welding Procedures, Welders, and Welding Operators.
    1. Qualifications of Welders: All casing pipe welding on this Project performed by welders qualified per requirements of AWWA Standard C206, latest edition, Section 4.4 - Qualifications of Welding Procedures, Welders, and Welding Operators.
    2. Welding Casing Pipe: All design and preparation of casing pipe joints and production welding of casing pipe joints, to meet requirements of AWWA Standard C206, latest edition, Section 4.6 – Welding Procedure Details.
    3. Inspection and Testing Welds: Engineer inspects and tests all production welds. Contractor holds responsibility of notifying Engineer sufficiently in advance of performing any welding work for Engineer to prepare for inspection and testing. Contractor provides Engineer's inspector with free access to Work inspected, and inspector with reasonable facilities and space for inspecting, testing, and obtaining information relative to materials used and progress and condition of Work. Inspecting and testing welds performed per AWWA Standard C206, latest edition, Sections 5.1 – Inspection, and 5.2 - Testing.
B. Engineer’s inspection of Work shall not relieve Contractor of responsibility for quality of all welding performed or for performing Work as specified.
    1. Acceptance Standards: Engineer accepts/rejects any production weld per criteria of AWWA Standard C206, latest edition, Sections 5.1 – Inspection, and 5.2 - Testing.
    2. Defective Welds: Repair or remove any welds determined defective, per requirements of AWWA Standard C206, latest edition, Section 4.7 – Repair of Welds.

3.7 GROUTING

A. Furnish and operate suitable equipment for all grouting operations along entire length of casing or tunnel on exterior side, to fill voids created during installation.

B. Fill all excavation outside casing or tunnel with pressure-applied grout or other approved fill unless otherwise directed by Engineer. Use care in grouting operations to prevent damage to adjacent utilities, street pavement, or other properties. Pressure used in grouting not great enough to distort or imperil any portion of Work.

C. Completely fill all voids outside limits of casing or tunnel excavation created by caving or collapse of earth, cover over excavation or other cause, with grout. As part of boring, jacking, or tunneling submittal, submit detail drawings showing number, size, and location of all grouting ports in casing pipe or tunnel liner used after installation to fill any potential voids. Seal all grouting ports by screwed steel plugs, tack weld, or other means after completing grouting procedures. All plugs fit flush inside casing or tunnel. Include grouting procedure intended to use in submittal. If tunneling method utilized, grout annulus between tunnel liner and earth at end of every 8-hour shift, or six feet of liner installed. No more than six feet of liner may be left ungrouted.

D. All grouting to eliminate external voids outside casing or tunnel limits, at Contractor expense, with cost included in Contractor unit bid price.

3.8 INSTALLING CASING BY JACKING

A. Completed casing must be free of dents, bends, weld protrusions, or other obstructions to allow smooth sliding of carrier pipe through casing. Final position of casing shall not vary from line and grade shown on plans or established by Engineer, by more than 1-inch in 10 feet.

3.9 INSTALLING CASING BY BORING

A. Installing casing and excavating and removing material within casing, to proceed simultaneously. Completed casing must be free of dents, bends, weld protrusions, or other obstructions to allow smooth sliding of carrier pipe through casing. Final position of casing shall not vary from line and grade shown on plans or established by Engineer, by more than 1-inch in 10 feet.

3.10 TUNNELING EQUIPMENT

A. Select tunneling equipment which, based on experience, proves satisfactory for excavating soils encountered.

B. Employ tunneling equipment able to handle various anticipated ground conditions, minimizes loss of soil ahead of face, and allows satisfactory support of excavated face.

C. Air Quality: Provide equipment to maintain proper air quality of tunnel operations during construction per OSHA requirements to include but not limited to air monitoring device inside while workers are present and forced air from clean source.

D. Enclose lighting fixtures in watertight enclosures with suitable guards. Provide separate circuits for lighting and other equipment. Electrical systems conform to requirements of NFPA 70.

3.11 TUNNELING DATA

A. Maintain shift logs of construction events and observations. Owner to have access to Contractor logs regarding:

1. Location of face by station and progress of tunnel drive during shift.
2. Hours worked per shift on tunneling operations.
3. Completed field forms for checking line and grade of tunneling operation, showing achieved tolerance relative to design alignment.

4. Location, elevation, and brief soil descriptions of soil strata and strata boundaries.
5. Observation of any lost ground or other ground movement.
6. Any unusual conditions or events.
7. Reasons for operational shutdown if drive is halted.
8. Time of grouting and pressure for grouting.
9. Advance rate per day.

B. Clearly mark primary liner with paint every 20 feet along tunnel with distance in feet from entrance shaft.

3.12 CONTROL OF TUNNEL LINE AND GRADE

A. Construction Control:
1. Establish lines and grade for installation, check lines and grade at beginning of Work, and report any errors or discrepancies to Engineer.
2. Use lines and grades established and maintain construction control points, reference lines, and grades for locating tunnel.
3. Establish control points sufficiently far from face, not affecting tunneling operations.

B. Line and Grade:
1. Maintain sufficient means to check alignment and grade continuously.
2. Check survey control for tunneling against an aboveground undisturbed reference at least once each day and once for each 20 feet of tunnel constructed.
3. When excavation is offline, or grade, make alignment corrections.
4. Construct primary liner to such tolerances to permit pipeline installation completed to elevations specified.

C. Earth Movement: Contractor responsible for damages due to settlement from any construction-induced activity or occurrence.
1. Survey crown, invert, and springline on each side of primary liner at 20-foot intervals, minimum once per day, or more frequently if line and grade tolerances are exceeded, to ensure alignment is within tolerances specified. Conduct survey immediately behind tunnel excavation to allow immediate misalignment correction.
2. If settlement of ground surface occurs during construction of tunnel affecting accuracy of temporary benchmarks, detect and report such movement. Temporary monumentation benchmark locations are indicated on Contract Drawings and use to verify temporary benchmark accuracy. Upon completion, submit field books pertaining to monitoring temporary monumentation benchmarks to Engineer.

3.13 MONITORING

A. Surface Settlement Monitoring:
1. Establish monitoring points on all critical structures.
2. Record location of settlement monitoring points with respect to construction baselines and elevations. Record elevations to 0.01-foot accuracy for each monitoring point location. Establish monitoring points at locations and by methods to protect from damage by construction operations, tampering, or other external influences.
3. Record ground surface elevations on centerline ahead of tunneling operations at minimum 10-foot intervals. Clearly mark settlement monitoring points by studs or paint for ease of locating.
4. Utilities and Pipelines: Monitor ground settlement directly above and 10 feet before and after utility or pipeline intersection.

B. Reading Frequency and Reporting: Contractor submits records of readings from survey points to Engineer.
   1. Take surface settlement monitoring readings:
      a. Before zone of active excavation reaching that point.
      b. When tunnel face reaches monitoring point (in Plan); and
      c. When zone of active excavation passes, and no further movement detected.
   2. Promptly submit all monitoring readings to Owner representative.
   3. Immediately report to Engineer any movement, cracking, or settlement detected.
   4. Following substantial completion but before final completion, make a final survey of all monitoring points.

3.14 INSTALLATION OF CARRIER PIPE IN CASING PIPE OR TUNNEL

A. General:
   1. After Engineer installs and accepts casing or tunnel liner, push carrier pipe through by exerting pressure on pipe barrel so pipe joints are always in compression.
   2. Take care while installing carrier pipe in casing or tunnel to ensure carrier pipe is not damaged. Repair any damage to carrier pipe before installing carrier pipe. Fully restrain all pipe before installation into casing.
   3. Install carrier pipe in casing or tunnel per recommendations of pipe manufacturer and specified herein. During entire installation, center carrier pipe in casing or tunnel.

B. Casing Spacers:
   1. Firmly attach casing spacers per manufacturer recommendations before installing carrier pipe in casing. Place spacers for a maximum of 12 inches from each side of each pipe joint, no more than maximum 8-foot spacing between spacers, and one full spacer is within 6 inches of each casing end.
   2. Prepare casing or tunnel bottom to ease installation of carrier pipe by lubricating 50 percent with soap compound or other methods approved by Engineer.

C. After carrier pipe installed, Contractor performs continuity test to demonstrate carrier pipe is isolated from casing or tunnel liner.

END OF SECTION

SECTION 33 14 13 - PUBLIC WATER UTILITY DISTRIBUTION PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Constructing all piping and pipe accessories required for Project. Contractor furnishes all materials, equipment, tools, labor, superintendence, and incidentals required for complete construction of the work as shown on Contract Drawings and specified herein.
2. All materials used in potable water main construction shall be new, and size, type, and class as shown on Contract Drawings and specified herein for various items of construction.

B. Scope of Work:
1. Trench Safety Systems work includes but not limited to trench and excavation safety systems by cut-back or braced-excavation method for all trenches 5 feet and deeper whether indicated on Drawings or required by actual field conditions. Protect trenches exceeding or not exceeding 5 feet in depth as required by OSHA, state, and local standards and as specified in Section 31 41 10 “Trench Safety Systems.”
2. Contractor responsible for complying with all applicable State of Texas safety standards and applicable OSHA regulations concerning trench excavation, general excavation, and construction safety.
3. Contractor responsible for implementing a trench shoring system where trench depth exceeds 5 feet.

C. Related Sections:
1. Division 01 Specification Sections apply to Work of this Section.
2. Division 03 Specification Sections apply to Work of this Section.
3. Division 31 Specification Sections apply to Work of this Section.
4. Division 33 Specification Sections apply to Work of this Section.

1.2 REFERENCES

A. Potable water process piping and associated components shall conform to:
1. AWWA B300 – Hypochlorites
2. AWWA B301 – Liquid Chlorine
3. AWWA C900 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 in. through 60 in.
4. AWWA C605 – Underground Installation of Polyvinyl Chloride (PVC) and Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe and Fittings
5. AWWA C110 – Ductile Iron and Gray Iron Fittings
6. AWWA C111 – Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
7. AWWA C153 – Ductile Iron Compact Fittings
8. AWWA C104 - Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
9. AWWA M23 – PVC Pipe – Design and Installation
10. AWWA C502 – Dry-Barrel Fire Hydrants
11. AWWA C509 – Resilient-Seated Gate Valves for Water Supply Service
12. AWWA C515 – Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service
13. AWWA C651 – Disinfecting Water Mains
14. AWWA C655 – Field Dechlorination
15. AWWA C800 – Underground Service Line Valves and Fittings

16. AWWA C904 - Cross-Linked Polyethylene (PEX) Pressure Pipe, 1/2 in. through 3 in., for Water Service
17. ASTM D2774 – Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
18. ASTM D2737 – Standard Specification for Polyethylene (PE) Plastic Tubing
19. ASTM D2837 – Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
20. ASTM D3139 – Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
21. ASTM A536 – Standard Specification for Ductile Iron Castings
22. ASTM F477 – Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
23. NSF/ANSI 61 – Drinking Water System Components – Health Effects
24. AASHTO – LRFD Bridge Design Construction Specifications
25. Uni-Bell PVC Pipe Association – Handbook of PVC Pipe Design and Construction

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 “Submittal Procedures.”
B. Submit manufacturer data on all pipe, fittings, specials, service tape, valves, meters, and other materials specified herein to use on Project. Include pipe thickness class calculations, special coatings, lining information, and special embedment requirements differing from that indicated in Contract Documents.
C. Laboratory analysis for rock embedment including sieve analysis, fracture faces, abrasion tests and soundness tests.
D. Trench Safety Program.

1.4 REGULATORY REQUIREMENTS

A. Conform to applicable code for piping and component requirements.
B. All applicable TCEQ regulations shall be strictly adhered to.

1.5 TRENCH SAFETY

A. Comply with all federal, state, and local trench safety requirements and trench and excavation safety.

1.6 CERTIFICATION

A. Certifications properly executed by manufacturer shall be furnished to Engineer showing compliance to specification requirements and standards sighted herein. Test data from tests performed shall be provided as requested by Engineer.

1.7 INSPECTION

A. Engineer and representatives shall have access to all phases of work. Manufacturer and Contractor shall provide proper facilities for access and inspection. Material, fabricated parts, and pipes discovered defective, or do not conform to Specification requirements, will be subject to rejection any time before final acceptance of pipe.

1.8 SCHEDULE OF PIPE

A. Only pipe considered for use on Project are those specified herein. Only use each specified type of pipe on those pipelines designated.

Size and Use	Type and Class
12-inch Water Main	PVC, C900 DR 18
12-inch Water Main	Restrained Joint PVC, C900 DR 18
6-inch Water Main	PVC, C900 DR18

PART 2 - PRODUCTS

2.1 GENERAL

A. Select pipe to install on a particular water main, if that type of pipe is specified herein for use on that water main. All pipe of like size and use, however, shall be same type and class. Only use approved pipe in construction of all pipelines and piping.

B. All pipe and fittings used in Project shall comply with all applicable NSF/ANSI 61 requirements.

C.

2.2 POTABLE WATER PVC PRESSURE PIPE

A. 4- to 24-inch AWWA C900 PVC Pipe, DR 18, shall:

1. meet AWWA C900 requirements. Elastomeric gasket shall meet requirements of ASTM F477, solid wall, virgin PVC resin, cell class 12454 per ASTM D1784, blue in color, 20-foot lay length.
2. qualify minimum 4,000-psi HDB per ASTM D2837. Bell section shall be designed at least as hydrostatically strong as pipe. Joint shall comply with ASTM D3139 requirements.
3. be marked with AWWA standards including size, dimension ratio, pressure class, manufacture name and code, and seal of testing agency that verified suitability of pipe material for potable water service.
4. be pressure tested four times rated pressure for minimum five seconds for each length of pipe (standard and random), including integral bell. Pipe shall meet all additional test requirements as defined in AWWA C900.
5. be as manufactured by Napco, Diamond Plastics, or approved equal.

B. 4- to 24-inch AWWA C900 Restrained Joint PVC Pipe, DR 18, shall:

1. meet all AWWA C900 requirements and Article 2.2A except as modified herein.
2. be restrained joint by utilizing precision-machined grooves on pipe spigot and inside bell. When assembled, a nylon spline is inserted through an entry hole in pipe bell, resulting in a continuous circumferential restrained joint.
3. shall be Certa-Lok, as manufactured by Napco, or approved equal.

2.3 PIPE FITTINGS

A. Pipe fittings used with PVC water mains shall be ductile or cast iron, mechanical joint (MJ), cement-mortar lined, asphaltic-coated fittings conforming to AWWA C110 requirements and suitable for use with specified PVC pipe used.

B. Unless otherwise specified, use joint restraints for all buried fittings where indicated on Contract Drawings. Use mechanical joint restraints in addition to concrete thrust-blocking

unless indicated otherwise. Restraining glands shall have pressure rating equal to pipe used. MJ restraints shall be EBAA Series 2000PV, Romac PVC Romagrip, or approved equal.

2.4 VALVES

A. Gate Valves
   1. Furnish and install gate valves of size, type, and configuration indicated, where shown on Contract Drawings. Gate valves shall be flanged, mechanical joint, or hub end as shown on Contract Drawings or required by joint used in piping. All valves shall open by turning left and, unless otherwise specified, have a non-rising stem and furnished with a 2-inch operating nut when valves are buried and with hand wheels when above ground. When operating nut is more than 3 feet below ground, valves shall be supplied with an operator extension to position operating nut within 3 feet of finished ground surface.
   2. Shall meet all requirements specified in AWWA C515 or C509.
   3. Designed for a working pressure of 250 psi.
   4. Buried gate valves shall be MJ restrained per Article 2.3.
   5. Concrete foundation with compacted base provided for all gate valve installations per specifications and Contract Drawings.
   6. All valves shall be spray coated with a two-component thermal setting epoxy to cover all interior wetted ferrous surfaces. Finished coating shall have a minimum 4-mil thickness. Coating shall meet requirements of City of Midland Standard Specifications.
   7. Gate Valves to be Mueller A-2361, M&H 4067, or approved equal.

B. Valve Boxes and Extension Stems.
   1. Extension stems furnished on buried valves where top of operating nut is more than 36 inches below finished grade. Top of extension stem shall be within 3 feet of finished ground surface.
   2. Buried gate valves provided with cast iron valve boxes. Install valve boxes with reinforced concrete collar as indicated in Contract Drawings.
   3. Valve boxes to be Bass & Hays 340-1 with 6-inch C900 PVC Pipe, or approved equal.

2.5 TAPPING VALVES

A. Furnish and install tapping gate valves of size, type, and configuration indicated, where shown on Contract Drawings. Tapping gate valves shall be mechanical joint by flanged joint unless otherwise specified. All tapping gates valves shall open by turning left and, unless otherwise specified, have a non-rising stem and furnished with a 2-inch operating nut when valves are buried. Where operating nut is more than 3 feet below ground, valves shall be supplied with an operator extension to position operating nut within 3 feet of finished ground surface.

B. Shall meet all requirements specified in AWWA C509.

C. Shall be designed for a 250-psi working pressure as manufactured by Mueller Co. or approved equal.

D. All valves shall be spray coated with a two-component thermal setting epoxy to cover all interior wetted ferrous surfaces. Finished coating shall have minimum 4-mil thickness. Coating shall meet requirements of City of Midland Standard Specifications.

E. Gate Valves to be Mueller A-2361, M&H 4067, or approved equal.

F. Buried tapping gate valves shall be MJ restrained per Article 2.3.

G. Concrete foundation with compacted base provided for all gate valve installations per specifications and Contract Drawings.

H. Valve Boxes and Extension Stems.
   1. Extension stems furnished on buried valves where top of operating nut is more than 36 inches below finished grade. Top of extension stem shall be within 3 feet of finished ground surface.
   2. Buried tapping gate valves provided with cast iron valve boxes. Install valve boxes with reinforced-concrete collar as indicated in Contract Drawings. Valve boxes to be Bass & Hays 340-1 with 6-inch C900 PVC Pipe or approved equal.

2.6 TAPPING SLEEVES

A. Furnish and install tapping sleeves of size, type, and configuration indicated, where shown on Contract Drawings. Tapping sleeves shall be full wraparound type, 200 psi rated, stainless steel, ductile iron, or approved equal. All bolts and various other hardware shall be stainless steel.
B. Romac SSTIII or approved equal.

2.7 FIRE HYDRANT

A. Furnish and install where shown on Contract Drawings. Fire hydrants shall conform to all AWWA C502 and ANSI/NSF 61 requirements. Unless otherwise specified, all hydrants shall have an operating nut that opens by turning left, with an arrow cast on hydrant specifying turn direction.
B. 250 psi minimum working pressure.
C. Shall contain a standard mechanical joint per AWWA C111, to connect to water system.
D. Install per manufacturer specifications, herein, and Contract Drawings.
E. All fire hydrants shall be spray coated with a two-component thermal setting epoxy to cover all interior wetted ferrous surfaces. Finished coating shall have a minimum 4-mil thickness. Coating shall meet requirements of City of Midland Standard Specifications.
F. All fire hydrants shall be painted Federal Safety Yellow.
G. Mueller Super Centurion or approved equal.

2.8 PIPE REPAIR

A. As necessary, furnish and install pipe repair clamps.
B. Pipe repair clamps shall be stainless steel, full-seal clamps.
C. Repair clamps to be Mueller 500/510 Series or approved equal.

2.9 STANDARD SERVICE CONNECTIONS

A. Furnish and install service connections (1-2 inches). As possible, all components shall be of same manufacturer:
   1. Crosslinked Polyethylene (PEXa):
      a. Copper tube sizing (CTS), SDR 9, meet NSF/ANSI 61 and AWWA C904 standards.
      b. Tubing pressure rating shall be 200-psi max working pressure at 73 degrees F.
      c. PEXa Tubing shall be Rehau Municipex Pipe, Blue, or approved equal.
   2. Service Saddles:
      a. For use on type of pipe connected to.
      b. Outlet shall be tapped with AWWA taper (CC).
      c. Meet all requirements of AWWA C800 and NSF/ANSI 61 standards.
      d. Mueller BR 2 S, Ford 202BSD, AY McDonald 2855 or approved equal.

3. Corporation Stops:
    a. Contain an AWWA taper (CC) inlet, and compression outlet.
    b. Meet all requirements of AWWA C800 and NSF/ANSI 61 standards.
    c. B-25008N, Ford FB1000-4-G-NL, AY McDonald 74701B-22 1, or approved equal.
4. Meter Stop: Mueller B-25172N, Ford BA43-444W-G-NL, AY McDonald 74602B-22 1, or approved equal.
5. Meter Boxes: EJ 32197099A02, EJ 32244000A01, or approved equal.

2.10 LARGE SERVICE CONNECTIONS

A. Furnish and install service connections (3 inches and larger) in accordance with City of Midland Construction Details and Standard Specifications.

2.11 ACCESSORIES

A. Warning Tape: Provide traceable tape made of plastic, blue in color, and minimum 6 inches wide with lettering that states a buried water main is below.
B. Tracer Wire: Provide tracer wire that is 12 gage, copper or copper coated steel, tape to top of pipe surface.

PART 3 - EXECUTION

3.1 MEASUREMENT AND PAYMENT

A. Potable Water Main
    1. Measurement will be from natural ground to flow line of the pipe. Owner representative will perform measurement.
    2. Payment for installation of potable water main will be on a linear foot basis. Gravel embedment, excavation, trenching, backfill, and other items necessary to completely install pipe are included in this unit price.
B. Pipe Fittings
    1. Measurement provided by Contractor and verified by Owner representative.
    2. Payment for installation of pipe fittings will be on a weight basis (TON). All necessary items to completely install fitting are included in this unit price.
C. Valves, Tapping Sleeves, Tapping Valves, Fire Hydrants, and Pipe Repair
    1. Measurement provided by Contractor and verified by Owner representative.
    2. Payment for installation of valves, tapping sleeves, tapping valves, fire hydrants, and pipe repair will be on a (each) basis. All necessary items to facilitate a complete install are included in this unit price.

D. Standard and Large Service Connections
    1. Measurement provided by Contractor and verified by Owner representative.
    2. Payment for installation of services connections will be on a lump sum basis. All necessary items to facilitate a complete install are included in this unit price.
E. Warning Tape
    1. Measurement provided by Contractor and verified by Owner representative.
    2. Payment for installation of warning tape will be on a linear foot basis. All necessary items to facilitate a complete install are included in this unit price.

F. Tracer Wire
   1. Measurement provided by Contractor and verified by Owner representative.
   2. Payment for installation of tracer wire will be on a linear foot basis. All necessary items to facilitate a complete install are included in this unit price.

3.2 POTABLE WATER MAIN INSTALLATION

A. General
   1. All pipe and accessories for work specified herein shall be unloaded, handled, laid, jointed, tested for defects and for leakage as herein specified.
   2. Coordinate delivery storage, and delivery schedule with Owner representative.
   3. Pipe bending and joint angular deflection shall meet requirements of AWWA C605 and manufacture specifications. The more stringent shall apply to Project.
   4. Connections between new work and existing work, where required, shall use proper transition sleeves and fittings to suit actual conditions. Additional bends may also be necessary to provide minimum pipe separations as required by TCEQ. Provide these fittings, special sleeves, and bends after verification from Engineer. When necessary to interrupt service to existing facilities to make connection to an existing line, Contractor may be required to make connections as designated by Owner at no additional cost to Owner.

B. Contractor responsible for all material he furnishes and shall replace, at own expense, all material found defective in manufacture or became damaged in handling after delivery.

C. Storage, Handling Pipe, and Accessories
   1. Unload all pipe, fittings, and other accessories, unless otherwise directed at point of delivery. Haul to and distribute at site of work. When loading and unloading, lift by hoists/slid, or roll on skidways to avoid shock or damage to materials. DO NOT drop. Pipe handled on skidways must not be skidded or rolled against pipe already on the ground.
   2. Place pipe, fittings and accessories along site to keep as free as possible from dirt, sand, mud, and other foreign matter.
   3. When prolonged exposure to direct sunlight anticipated, cover PVC pipe and accessories with opaque material while permitting adequate air circulation above and around pipe.

D. Trench Excavation
   1. Provide construction-staking services. Contractor responsible for notifying Owner representative of any concerns with construction staking.
   2. Excavate to alignment and elevations indicated on Contract Drawings or as staked in the field. Any deviations shall be approved by Engineer.
   3. No classification of or extra payment for excavated materials. Excavate all materials encountered as required. Protect adjacent structures and property from damage by construction equipment.
   4. Stockpile excavated materials to not endanger workers or public and will cause least obstruction to roadways.
   5. Trench bottom, as shown on Contract Drawings, is approximately 4-6 inches below bottom of pipe grade so bedding material can be placed beneath pipe per trench cross-section details and specifications. Minimum depth of cover for piping shall be 36 inches unless otherwise specifically shown on Contract Drawings.
   6. As specified, install trench safety systems where required. Make trench walls vertical to at least 1 foot above top of pipe. Vertical trench walls above this point are not required; however, in areas of limited right-of-way or when necessary to protect existing facilities or private property, limit slope of trench wall. Where necessary to stay within maximum

width limits at top of pipe or maintain a relatively straight trench wall to remain within available right-of-way, adequately support trench walls as required by specifications and OSHA regulations. Contractor fully responsible for any damage to private property or existing facilities due to inadequate support.

7. Excavate trench only as necessary to install pipe. Excavation limits are:
   a. Pipe less than 18 inches in diameter: Pipe O.D. +12 inches.
   b. Pipe 18-36 inches in diameter: Pipe O.D. +18 inches.
8. Maintain trenching equipment on sufficiently level roadbed to provide substantially vertical trench walls.
9. To obtain a true even grade, fine grade and shape trench per details shown on Contract Drawings. Correct any part of trench excavated below grade by filling with approved material and thoroughly compacting. If clay, rock, or other unyielding material encountered in trench bottom, remove to 6 inches below grade, refill with approved material, and thoroughly compact to grade.
10. Trench digging machinery may be used to make trench excavations except where operations would cause damage to existing structures above or below ground. Employ hand methods in such instances.
11. Locate all existing utility lines, whether shown on Contract Drawings, including consumer service lines, far enough in advance of trenching to make proper provisions for protecting lines and allow for any deviations required from established lines and grades. Notify operators of all oil or gas pipelines before excavation around such lines so operators may be present during excavation
12. DO NOT disrupt service on any utility lines except consumer service lines which may be taken out of service for short periods of time, if obtained permission from Owner representative.
13. Immediately notify proper utility company of any damage to utility lines so service may be established with least possible delay. Repair or replace any damage to existing lines. Repair of consumer lines authorized to cut or be temporarily taken out of service shall be by Contractor expense and as directed by an official representative of the owner of damaged line.
14. Properly support all new and existing lines to prevent settlement or damage to line both during and after construction.
15. Where necessary to prevent caving, adequately support trench.
16. Maximum horizontal offset of trench wall from bottom of trench to top of trench (undercutting) shall be 4 inches.
17. All excavation shall be unclassified, and no extra compensation made for solid rock excavation. Contractor is expected to make boring of his own and satisfy himself to character of material encountered.

E. Dewatering: Where running or standing water occurs in trench bottom, remove water by pumps and other suitable means to prevent pipe flotation, until pipe is installed and backfill placed and compacted. Dewatering is considered incidental to unit price for which it is being performed.

F. Trench Methods
   1. Trench Boxes: Submit manufacturer-standard data sheet and certificate of compliance signed by a registered professional engineer stating maximum allowable depth for given design pressure for each type of trench box proposed for use.
   2. Alternative Systems: If composed of steel, aluminum, wood, or a combination of materials proposed, submit design calculations signed by a registered professional engineer showing all member properties, design strengths, and any stress increases used with justification for their use.

G. Laying Pipe
   1. Place pipe and fittings into a trench with ropes and skids, slings on a backhoe bucket, or by hand. DO NOT throw pipe or fittings into trench and allow no part of pipe to take an unrestrained fall onto trench bottom.
   2. When not laying pipe, close the open ends of installed pipe to prevent trench water, dirt, and foreign matter from entering line.
   3. Lay pipe to elevations shown in Contract Drawings.
   4. Tape to top of pipe approved tracer wire as specified.

H. Joint Assembly, Field-Cutting, Chamfering, and Curvature: Perform per Uni-Bell PVC Pipe Association PVC Pipe Design and Construction handbook and/or manufacturer-recommended procedures. The more stringent shall apply.

I. Backfill
   1. General
      a. Backfill all pipeline excavations to restore pre-existing conditions as minimum requirement and fulfill all supplementary requirements indicated in Contract Drawings and specifications. Backfilling operations shall start as soon as conditions will permit on each section of pipeline to provide continuity in subsequent operations and restore normal public service as soon as practicable on a section-by-section basis. All operations shall be pursued diligently, with proper and adequate equipment, to assure acceptable results.
      b. When soil types determined by Owner representative as undesirable for backfill are excavated from trench, remove and dispose such material at no additional cost to Owner.
   2. Foundation
      a. Only required when trench bottom is unstable. In such cases, over-excavate bottom of trench and bring back to grade. Utilize ASTM C33 Grade #57 or #67 aggregate for foundation.
      b. Moisten material and place in lifts as indicated. Compact by tamping to density not less than 95-percent ASTM D1557 with ±2-percent optimum moisture content.
      c. All granular material furnished for foundation shall consist of natural or synthetic mineral aggregate such as crushed gravel, crushed rock, crushed stone, or slag. All granular material shall be crushed and have at least two broken faces. Pea gravel will not be allowed. No material larger than 3/4 inch shall be placed.
   3. Bedding
      a. Required to bring trench bottom up to grade. Place by hand to provide uniform and adequate support under pipe. Provide holes for pipe bells at each joint to ensure uniform support for pipe.
      b. Bedding layer shall be 6 inches thick. Use 3/4-inch crushed stone, meeting requirements of ASTM C33, Grade No. 7 or 8. For unpaved trenches, native material can be used if material has a liquid limit less than 30 and plasticity index less than 15. Native material must be existing excavated soil from trench with all material broken down to less than a 3/4 inch diameter.
   4. Haunching
      a. Defined as backfill from bottom of pipe to springline of pipe. Place and consolidate material under the pipe haunch so adequate side support is provided to pipe without causing displacement from proper alignment.
      b. Moisten material and place in lifts not exceeding 6 inches thick. Compact by tamping to density not less than 95 percent of ASTM D1557 with a ±2 percent optimum moisture content.

c. Place material by hand or approved mechanical methods. Use 3/4-inch crushed stone, meeting requirements of ASTM C33, Grade No. 7 or 8. For unpaved trenches, native material can be used if material has a liquid limit less than 30 and plasticity index less than 15.Native material must be existing excavated soil from trench with all material broken down to less than a 3/4 inch diameter.
d. Material shall be free from cinder, ashes, refuse, vegetable or organic material, boulders, or other unsuitable material.
e. Water jetting not allowed.

5. Initial Backfill
   a. Defined as backfill from springline of pipe to 1 foot above pipe. Moisten material and place in lifts not exceeding 12 inches thick and compact to density not less than 95 percent of ASTM D1557 with ±2-percent optimum moisture content. Take care to not damage pipe during compaction.
   b. Place material by hand or approved mechanical methods. Use 3/4-inch crushed stone, meeting requirements of ASTM C33, Grade No. 7 or 8. For unpaved trenches, native material can be used if material has a liquid limit less than 30 and plasticity index less than 15.Native material must be existing excavated soil from trench with all material broken down to less than a 3/4 inch diameter.
   c. Material shall be free from cinder, ashes, refuse, vegetable or organic material, boulders, or other unsuitable material.
   d. Water jetting not allowed.
6. Final Backfill
   a. Defined as backfill from 1 foot above pipe to bottom of subgrade for paved areas or to existing grade for unpaved areas. Moisten material, place in lifts not exceeding 6 inches thick, and compact to density not less than 95 percent of ASTM D1557 with a ±2-percent optimum moisture content. Take care to not damage pipe during compaction.
   b. Place material by hand or approved mechanical methods. Use Portland cement stabilized backfill or crushed stone screening (crusher fines).
   c. Portland cement stabilized backfill shall consist of base course, blow sand or native soil stabilized by addition of Portland cement. Crushed stone or concrete aggregate shall not be used.
   d. Submit a mix design prepared by an approved commercial laboratory to produce a minimum seven-day compressive strength of 150 psi. In no case shall minimum cement content of mix be less than one sack per cubic yard. Cement used in Portland cement stabilized backfill shall be Type I or Type II, ASTM C150. Base course used for Portland cement stabilized backfill shall be crushed material per TxDOT Item 248 Type F, Grade 2.
   e. Blow sand used for Portland cement stabilized backfill shall be clean, free from organic matter, clay lumps, rock and other deleterious matter.
   f. Native soil used for Portland cement stabilized backfill shall be clean, free from clods and organic matter, and rock more than 2 inches.
   g. Crushed stone screening used for backfill shall be sharp grained particles of crushed stone that meet the following gradation:

Sieve Size	% Passing
2"	100
#4	35-100
#10	20-100
#40	5-35
#200	4-10

h. Minimum depth of stabilized backfill or crusher fines shall be 12 inches. When utilities are constructed under existing paving, stabilized backfill or crusher fines shall extend to top of base course. When utilities are constructed under existing unpaved streets not scheduled for immediate pavement construction, stabilized backfill or crusher fines shall extend to existing roadway surface. When utilities are constructed in new streets scheduled for immediate paving or streets in new subdivision where paving contract with property developer is approved, stabilized backfill or crusher fines shall extend to bottom edge of 8 inches of subgrade, or, if paving contractor constructed a portion of roadway before utilities construction, stabilized backfill shall extend to top of course Contractor finished. In no case shall backfill extend above top of base course. If final course of asphaltic concrete is placed, street or alley surface shall not be cut for utility installation.

i. Material shall be free from cinder, ashes, refuse, vegetable or organic material, boulders, or other unsuitable material.

j. Water jetting not allowed.

k. Install tracible warning tape in Final Backfill zone 6 inches below finished grade of trench directly above potable water main.

J. Cleanup

1. DO NOT round up backfill over trenches. Compact surface of trench backfill and blade to final grading contours.
2. Maintain trench surfaces in satisfactory manner until final completion and acceptance of work. Maintenance shall include blading as necessary, filling depressions caused by settlement, and other work required to keep all areas presentable.
3. Correct any trench settlement which occurs within the one-year warranty period at no expense to Owner.

3.3 POTABLE WATER MAIN FITTING INSTALLATION

A. Connect fittings, meters, and valves with flanged or mechanical joints as indicated on Contract Drawings. Each joint shall include flanged ends or gland retainer, gasket, and bolts required to complete connection. Perform all work necessary to make connections and be responsible for quality and proper operation of those joints.

B. Procedures

1. Before making connections, properly support pipe, fittings, or valves but free to move as bolted. Set flange faces so bolt holes are properly aligned, flange faces bear uniformly on gaskets, and flanges are not under strain after joint completion.
2. To avoid strains upon flanges, gradually tighten bolts at uniform rates sequentially on opposite sides of flanges. To assure flanges are not under strain, Engineer may request bolts loosened in any joint. Install mechanical joint fittings and valves in a similar fashion as described for flanged.
3. Buried fittings will require polyethylene wrap with a 10 mils thickness of minimum.

C. All underground water main fittings shall be mechanical joint with a pressure rating equal to or greater than water main pipe material.

D. Restrained joints by concrete blocking/MJ restraints as specified on Contract Drawings.

1. Concrete Blocks:

a. Provided bearing solidly against undisturbed trench bank, at all changes in direction/elevation. Concrete for blocking shall be Class A with a 28-day, 3,000-psi compressive strength.

b. All fittings shall be wrapped in polyethylene sheeting with minimum3-mil thickness before concrete blocking.

2. MJ Restraints
    a. Provided at all changes in direction/elevation.
    b. Install per manufacturer recommendations.

E. Valve, Tapping Valve, Tapping Sleeve, and Pipe Repair: Install in configuration indicated on Contract Drawings, per manufacturer specifications, and herein. Valve boxes shall be supported by a ring of Class A concrete as indicated on Contract Drawings and specifications.

F. Fire Hydrant: Set plumb to grade as established by Engineer and have nozzles parallel with and/or at right angles to curb, pumper nozzle facing curb.
    1. Hydrant bowl shall be well braced against unexcavated earth at end of trench with concrete blocking. Place concrete blocking so as not to interfere with hydrant drains and so joints or flanges are accessible.
    2. Hydrant shall be connected to main with a 6-inch ductile iron branch controlled by and independent 6-inch gate valve. Each hydrant shall be set upon a stone or concrete slab not less than 4 inches thick and not less than 1 square foot of surface area.
    3. Place around base of hydrant not less than 7 cubic feet of sound broken stone, clean gravel, or other suitable material to provide reservoir capacity so hydrant will completely drain when closed. Gravel or broken stone shall reach from bottom of trench to at least 6 inches above waste opening in hydrant. Operate each to prove to Owner representative that drain hole has not been plugged with concrete or other material.

G. Service Connection: Install in orientation and configuration indicated on Contract Drawings, per manufacturer specifications, and herein.

3.4 HYDROSTATIC TESTING

A. Water mains shall be tested per AWWA C605 and specifications.

B. Provide all materials, equipment, tools, labor, superintendence, and incidentals required to achieve a completed and approved hydrostatic test.

C. Procedure
    1. Slowly fill each section of pipe with water at point of lowest elevation. Apply pressure and maintain by pump connected to pipe in satisfactory manner.
    2. As line is filled and before applying test pressure, expel all air from pipe. To accomplish this, if necessary, make taps at points of highest elevation. After test, tightly plug taps per specifications.
    3. Test shall not begin until after water main is properly filled, flushed, and purged of air. Pressurize water main to 1.25 times system working pressure or minimum 180 psi, whichever is greater, at highest point on section of line tested. Duration of each pressure test shall be as directed by Engineer but not exceed two hours.
    4. When test pressure is on pipe, carefully check line at regular intervals for breaks or leaks. Repair any joints showing appreciable leaks and remove/replace any cracked or defective pipes or fittings with sound materials as provided. Repeat test until satisfactory results obtained.
    5. After all defects in line are satisfactorily repaired and all visible leaks stopped, make a leakage test on each valved section of line to determine quantity of water lost by leakage. Furnish all labor, material, and equipment required for making test. Determine leakage by measuring quantity of water supplied to each valved section of line, during test period, when various sections of line are under pressure.

6. Maximum allowable leakage for pressure drop in potable water main is calculated as:

$$Q = \frac{L\,D\,\sqrt{P}}{148{,}000}$$

Where:

Q = Quantity makes up water in gallons per hour
L = Length of pipe section being tested, in feet
D = Nominal diameter of the pipe in inches
P = Test pressure in psi ± 5 psi of specified

7. If sections show excessive leakage, locate and repair defective joints until leakage is within specified allowance.

3.5 DISINFECTION

A. Water mains shall be disinfected per 30 TAC §290.46(g), AWWA C651, and specifications. Before acceptance for operation, all portions of water mains installed shall be disinfected as specified. Before putting lines in service and after pressure tests made, thoroughly flush unit to be disinfected with water until all entrained dirt and mud removed before introducing chlorinating material.

B. Forms of Chlorine for Disinfection
   1. Liquid chlorine (gas) conforming to AWWA B301, containing 100-percent available chlorine.
   2. Sodium hypochlorite conforming to AWWA B300, containing 5- to 15-percent available chlorine.
   3. Calcium hypochlorite: Conforming to AWWA B300, containing 65-percent available chlorine.

C. Chlorination Methods for Disinfection
   1. Tablet/Granule Method: If elected, perform per AWWA C651, Section 4.3.
   2. Continuous-Feed Method: If elected, perform per AWWA C651, Section 4.4.
   3. Slug Method: If elected, perform per AWWA C651, Section 4.5.
   4. Spray Disinfection: If elected (only use for large transmission lines), perform per AWWA C651, Section 4.6.

D. Bacteriological Tests Verification:
   1. Perform per AWWA C651, Section 5.
   2. Submit test samples to a TCEQ-approved laboratory and indicate facility is free from microbiological contamination before placed into service.

E. Arrange for satisfactory disposal of water flushed from lines, using pipe, dikes, or channels to an adequate drain so no nuisance is created.

F. Include costs for disinfection in unit cost for installing pipe.

3.6 CLEAN UP

A. After construction work is complete, remove all rubbish, excess materials from excavations, and other debris from site of work. Replace/repair all affected items (surfacing, landscaping, etc.) to equal or better condition than preconstruction conditions. Cost of cleanup included in bid prices for various units of work.

END OF SECTION

Business 20 and San Andres
Water Main Extension

July 2022

Parkhill

Parkhill.com

Project No. 01-2854-19

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Business 20 and San Andres Water Main Extension

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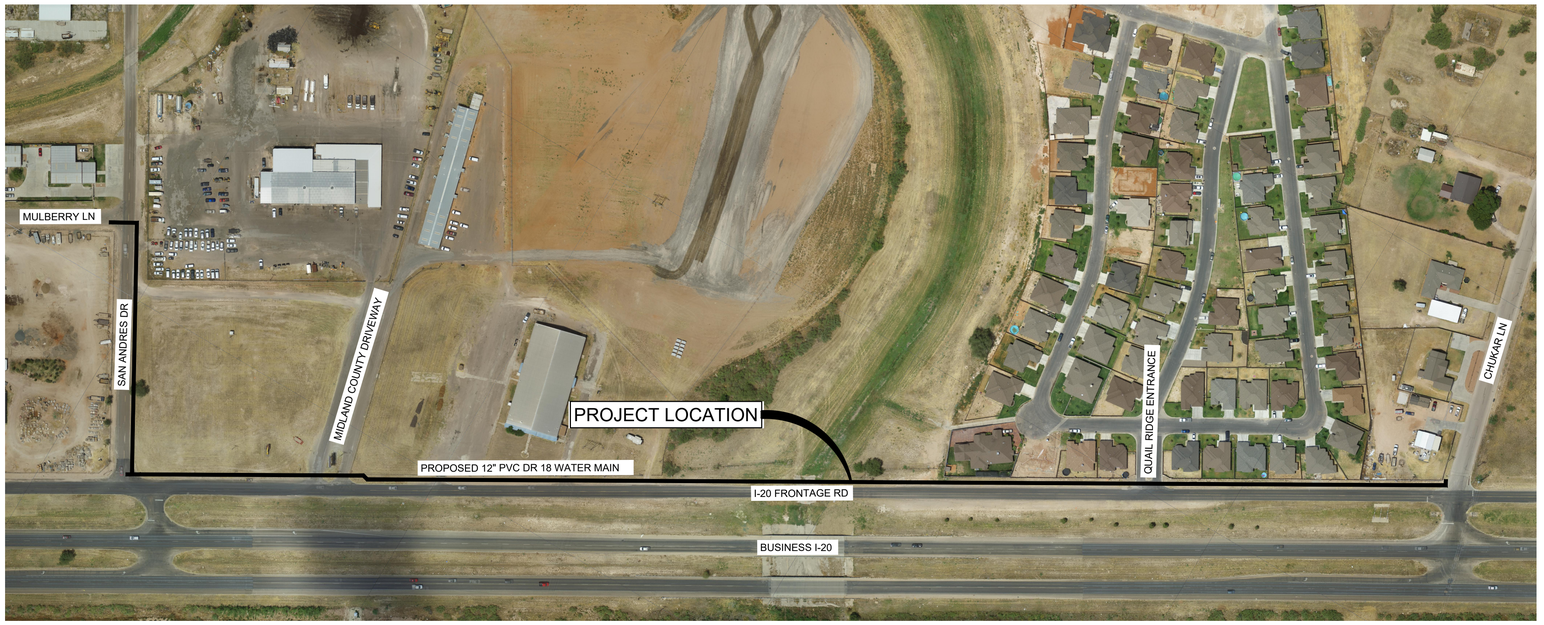
City of Midland
300 N. Loraine
Midland, Texas 79701-4725
(432) 686-1600

PROJECT NO.
2854.19

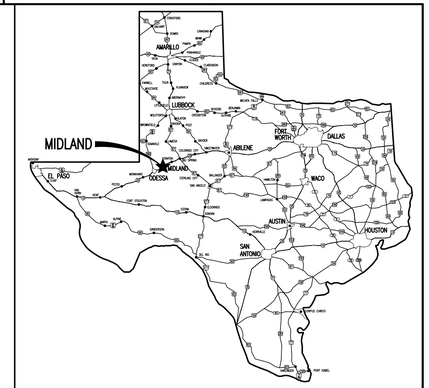
#	DATE	DESCRIPTION
4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

Cover Sheet

G-001



A1 PROJECT LOCATION MAP
NO SCALE



VICINITY MAP

SHEET INDEX

SHEET NO.	SHEET TITLE
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G-003	GENERAL NOTES, LEGEND, CONTACT LIST AND CONTROL POINTS
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C-102	12" WATER MAIN PLAN AND PROFILE STA 7+00 TO STA 14+00
C-103	12" WATER MAIN PLAN AND PROFILE STA 14+00 TO STA 21+00
C-104	12" WATER MAIN PLAN AND PROFILE STA 21+00 TO STA 28+00
C-105	12" WATER MAIN PLAN AND PROFILE STA 28+00 TO STA 30+55.52
C-501	MISCELLANEOUS WATER DETAILS
C-502	MISCELLANEOUS WATER DETAILS
C-503	MISCELLANEOUS WATER DETAILS
C-504	MISCELLANEOUS WATER DETAILS
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(432) 686-1600

PROJECT NO.
2854.19

#	DATE	DESCRIPTION
4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

Project Location Map, Vicinity Map and Sheet Index

G-002

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6.166
August 9, 2022

FILE NAME: X:\2019\2854.19\03_DSGN\01_DWG\010_GENG-002-2854.dwg LAYOUT NAME: G-002 PRINTED: Tuesday, July 19, 2022 - 4:50pm USER: RHaskins

LEGEND

EXISTING

- SEWER MAIN
- ROW LINE
- FENCE
- OVERHEAD ELECTRIC
- GAS PIPELINE
- WATER MAIN
- EDGE OF PAVEMENT
- EASEMENT
- PETROLEUM/OIL PIPELINE
- CATTLE GUARD
- SIGN
- GAS RISER
- GAS LINE SIGN
- SANITARY SEWER MANHOLE
- LIGHT POLE
- POLE
- TREE
- UNDERGROUND TELEPHONE SIGN
- GUY WIRE
- POWER POLE
- WATER VALVE
- TELEPHONE PEDESTAL
- FIRE HYDRANT
- PARKHILL CONTROL POINT

PROPOSED

- CASING
- WATER MAIN
- ASPHALT PAVEMENT
- CONCRETE RIPRAP
- CONCRETE PAVEMENT
- BORE PIT
- WATER VALVE
- WATER FITTINGS
- FIRE HYDRANT
- CAP
- COMBINATION AIR VALVE

GENERAL NOTES

1. ALL EXISTING UTILITIES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION OF THE NEW MAIN EXCEPT AS NOTED IN THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES (INCLUDING SERVICE CONNECTIONS) FROM DAMAGE AS A RESULT OF CONSTRUCTION.
2. ALTHOUGH ALL EFFORTS HAVE BEEN MADE TO INDICATE ALL MAJOR EXISTING UTILITIES ON PLANS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL SAID UTILITIES AS WELL AS SERVICE CONNECTIONS (WHETHER OR NOT INDICATED ON PLANS) PRIOR TO AND DURING CONSTRUCTION.
3. ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO BE SHOWN ON RECORD DRAWINGS. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR IS TO COORDINATE WITH UTILITY COMPANIES & LAND OWNERS TO VERIFY LOCATION OF EXISTING UTILITIES & CONTRACTOR MUST CALL THE RESPECTIVE "1-CALL" NUMBER FOR SUCH UTILITIES.
4. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH GAS, OIL, ELECTRIC, TELEPHONE, FIBER OPTIC, CABLE TV, SEWER, TXDOT, WATER UTILITIES OWNERS AND LAND OWNERS ETC. FOR ANY RELOCATION AND/OR PROTECTION OF EXISTING LINES OR CABLES AS REQUIRED, DUE TO CONSTRUCTION ACTIVITIES.
5. UNLESS OTHERWISE INDICATED, ALL EXISTING ROADWAYS, SIDEWALKS, & SURFACE GRADING AFFECTED BY CONSTRUCTION ACTIVITIES ARE TO BE RESTORED TO ORIGINAL CONDITION AND ELEVATION BY CONTRACTOR.
6. THE CITY'S UTILITY DEPARTMENT IS TO BE NOTIFIED 72 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR MUST NOTIFY THE CITY OF MIDLAND UTILITY DEPT., IN WRITING, OF ANY PROPOSED DUMP SITE(S) FOR OVERBURDEN FOR REVIEW AND APPROVAL. THE CONTRACTOR MUST OBTAIN APPROVAL OF ITS TRUCK ROUTE TO THE SITE, AS WELL AS FOR THE MATERIALS IT IS TO BE HAULING BEFORE REMOVAL OF OVERBURDEN FROM THE PROJECT SITE.
8. CONTRACTOR IS REQUIRED TO IMPLEMENT AN APPROVED STORM WATER POLLUTION PREVENTION (SWPPP) PLAN. CONTRACTOR MUST KEEP ALL DEBRIS & SPOIL OUT OF DRAINS, CULVERTS AND DROP INLETS AND ENSURE THAT THEY DO NOT BECOME CLOGGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
9. CONTRACTOR IS TO VERIFY LOCATION OF EXISTING UTILITY LINES BY POTHOLING AND/OR OTHER METHODS 2-WEEKS AHEAD OF PIPE LAYING CREWS TO ALLOW THE ENGINEER SUBMITTAL TIME TO INITIATE ANY NECESSARY CHANGES IN ALIGNMENT AND/OR GRADE OF THE PIPELINE.
10. UNLESS INDICATED OTHERWISE ON THE DRAWINGS, CONTRACTOR SHALL PROVIDE A MINIMUM COVER FROM TOP OF PIPE TO FINISH GRADE FOR ALL NEW PIPES AS FOLLOWS:
    WATER MAIN = 4.0'
    WASTEWATER MAIN = 6.5'
    ALL NEW UTILITY CROSSINGS SHALL FOLLOW APPLICABLE CITY OF MIDLAND DETAILS.
11. CONTROL FOR THIS PROJECT IS BASED ON THE TEXAS COORDINATE SYSTEM OF 1983 (NAD'83),
    TEXAS CENTRAL ZONE 4203. ELEVATIONS ARE BASED ON NAVD'88.
    CONVERGENCE = -0°52'.52.46".
    COMBINED SCALE FACTOR = 0.99990917
    DISTANCES ARE AT GRID
    GPS BASE STATIONS:
    LATITUDE: N. 32° 00' 43.82559"
    LONGITUDE: W. 102° 02' 39.40909"
12. PRIOR TO BEGINING WORK ADJACENT TO AND/OR WITHIN TxDOT RIGHT-OF-WAY CONTRACTOR MUST PREPARE A TRAFFIC CONTROL PLAN & SUBMIT TO TxDOT FOR APPROVAL. CONTRACTOR IS TO NOT BEGIN WORK UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN APPROVED, A COPY OF WHICH IS TO BE PROVIDED TO THE ENGINEER. TRAFFIC CONTROL PLAN MUST BE PREPARED IN CONFORMANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS.
13. PRIOR TO BEGINING WORK ADJACENT TO AND/OR WITHIN CITY RIGHT-OF-WAY CONTRACTOR MUST PREPARE A TRAFFIC CONTROL PLAN & SUBMIT TO THE CITY FOR APPROVAL. CONTRACTOR IS TO NOT BEGIN WORK UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN APPROVED, A COPY OF WHICH IS TO BE PROVIDED TO THE ENGINEER. TRAFFIC CONTROL PLAN MUST BE PREPARED IN CONFORMANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS.
14. CONTRACTOR IS TO WORK CONTINUOUSLY TO RESTORE ROADWAYS TO PLACE THEM BACK IN SERVICE. IF IN THE OPINION OF THE ENGINEER THE CONTRACTOR IS NOT WORKING DILIGENTLY, TO REPLACE THE PAVEMENT, THIS MAY BE CAUSE FOR THE CONTRACTOR TO CEASE WORK ON OTHER AREAS UNTIL THE ROADWAYS ARE RESTORED AND PAVEMENT REPLACED TO RESTORE TO THE ORIGINAL CONDITION.
15. CONTRACTOR IS TO USE A NIGHT PLUG AND SEAL THE OPENINGS OF THE PIPE DURING NON-WORKING HOURS.
16. CONTRACTOR IS TO COMPILE A RECORD OF ALL FOUND UNDERGROUND UTILITIES. THIS INFORMATION IS TO BE TRANSFERRED TO FINAL RECORD DRAWINGS.
17. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING ALL IMPROVEMENTS IN ACCORDANCE WITH CITY OF MIDLAND STANDARDS, DETAILS, AND REQUIREMENTS UNLESS INDICATED OTHERWISE ON THE DRAWINGS AND SPECIFICATIONS.
18. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DETAILS AND SPECIFICATIONS CONFORM WITH CITY OF MIDLAND STANDARDS, DETAILS, AND REQUIREMENTS AND MAKE ENGINEER AWARE OF ANY DISCREPANCIES.
19. CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE STANDARDS AND REGULATIONS FOR WORK IN TxDOT RIGHT-OF-WAY.
20. ALL CONSTRUCTION IS TO COMPLY WITH CITY OF MIDLAND STANDARDS AND SPECIFICATIONS WHEREVER APPLICABLE. ALL OTHER STANDARDS AND REQUIREMENTS ARE TO COMPLY WITH ALL APPLICABLE FEDERAL AND STATE REGULATIONS, REQUIREMENTS, AND STANDARDS. WHEREVER CITY OF MIDLAND STANDARDS AND FEDERAL OR STATE REQUIREMENTS DIFFER THE MORE RESTRICTIVE STANDARD, REQUIREMENTS, OR REGULATION WILL GOVERN.
21. FIRE HYDRANTS ARE SHOWN AS AN APPROXIMATE LOCATION AND ORIENTATION. CONTRACTOR SHALL COORDINATE WITH ENGINEER PRIOR TO INSTALLATION OF ALL FIRE HYDRANTS TO VERIFY EXACT LOCATION AND ORIENTATION REQUIRED.
22. ALL MECHANICAL JOINT FITTINGS ARE TO BE RESTRAINED, AND ALL FITTINGS ARE TO UTILIZE CONCRETE THRUST BLOCKING.
23. CONTRACTOR IS TO TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING FACILITIES THAT ARE ENCOUNTERED REGARDLESS OF WHETHER OR NOT THEY APPEAR IN CONSTRUCTION DRAWINGS.
24. CONTRACTOR IS TO NOTIFY ALL AFFECTED PROPERTIES AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY KNOWN OR PLANNED INTERRUPTION OF SERVICE OR ACCESS DUE TO ANY CONSTRUCTION ACTIVITY PERFORMED BY CONTRACTOR.
25. THERE IS TO BE NO MATERIAL STORAGE WITHIN TxDOT RIGHT-OF-WAY. MATERIAL STORAGE ON SITE IS TO BE PLACED IN SAN ANDRES DRIVE RIGHT-OF-WAY WORK ZONE APPROVED BY TRAFFIC CONTROL PLAN.
26. OSHA REQUIREMENTS AND ALL OTHER APPLICABLE FEDERAL, STATE, OR CITY OF MIDLAND SAFETY REQUIREMENTS ARE TO BE FOLLOWED AND COMPLIED WITH AT ALL TIMES.
27. CONTRACTOR HAS SOLE RESPONSIBILITY FOR ALL CONSTRUCTION STAKING AND TESTING.
28. ALL UTILITY COVERS MUST BE ADJUSTED TO FINISHED GRADE AND BE SET FLUSH WITH ADJACENT FINISHED SURFACE WHETHER FINISHED SURFACE IS PAVED OR UNPAVED.
29. CONCRETE RINGS ARE TO BE PLACED AROUND ALL PUBLIC INFRASTRUCTURE COVERS EXCEPT METER COVERS EVEN WHEN SUCH COVERS ARE LOCATED IN UNPAVED OR CONCRETE PAVED AREAS.
30. CONTRACTOR IS TO NOTIFY ENGINEER OF ANY ADDITIONAL DEMOLITION THAT MAY BE NEEDED AND RECEIVE WRITTEN CONFIRMATION THAT SUCH DEMOLITION IS APPROVED PRIOR TO ANY ADDITIONAL DEMOLITION TAKING PLACE.
31. ALL PUBLIC UTILITY TRENCH REPAIRS ARE TO INCLUDE 1.0' T-TOPPING ON BOTH SIDES OF PUBLIC UTILITY TRENCH EXCAVATION.
32. ALL SAW-CUTTING IS TO HAVE CLEAN, STRAIGHT EDGES AND IS CONSIDERED INCIDENTAL TO ALL PAVEMENT REMOVAL.
33. ALL CONCRETE FIBER REINFORCEMENT IS TO BE INSTALLED AT A RATE OF 1.5-POUNDS OF FIBER REINFORCEMENT PER EACH 1.0-CUBIC YARD OF CONCRETE PLACED (1.5-LBS / 1.0-CY) UNLESS OTHERWISE STATES IN CONSTRUCTION DRAWINGS.
34. ALL CONCRETE PAVEMENT, FILLET, AND COLLAR JOINTS ARE TO BE SEALED PER CITY STANDARDS.
35. EXISTING INFRASTRUCTURE IDENTIFIED FOR REMOVAL IS TO BE REMOVED IN ITS ENTIRETY, INCLUDING ANY VALVES, FITTINGS, STRUCTURE, AND APPURTENANCES.
36. EXISTING WATER MAIN TO BE ABANDONED IN PLACE MUST BE COMPLETELY FILLED WITH FLOWABLE FILL 2-SACK (2-SACK = 188 POUNDS PER CUBIC YARD) AND PLUGGED AT BOTH ENDS OF ABANDONED PIPE SECTION.
37. TIE IN ELEVATION FOR WATER MAIN RECONNECTION IS UNKNOWN. ADD AND REMOVE VERTICAL BENDS AS NECESSARY TO RECONNECT.
38. ALL ITEMS TO BE REMOVED OR DEMOLISHED BECOME THE OWNERSHIP OF THE CONTRACTOR. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL ITEMS IN AN EPA-APPROVED LANDFILL.
39. WATER MAIN DEFLECTIONS WHERE SPECIFIED OR REQUIRED ARE TO MEET PIPE MANUFACTURER SPECIFICATIONS FOR INSTALLATION. AS NECESSARY, FURNISH AND INSTALL APPLICABLE FITTING(S) TO ENSURE DEFLECTION REQUIREMENTS ARE MET.
40. CONTRACTOR MUST HOLD PRIOR TO BIDDING (EITHER ON PAYROLL OR THROUGH CONTRACT) A TCEQ WATER CLASS D FOR ALL PROJECTS INVOLVING WATER IMPROVEMENTS AND A TCEQ WASTEWATER CLASS D FOR ALL PROJECTS INVOLVING WASTEWATER IMPROVEMENTS.
41. CONTRACTOR SHALL GIVE ENGINEER 72-HOURS NOTICE FOR INSPECTION/TESTING OF ALL CRITICAL ASPECTS OF THE PROJECT. THESE INCLUDE, BUT ARE NOT LIMITED TO, INSPECTION TESTING OF- PIPE EMBEDMENT, FITTING RESTRAINT, PIPE BACKFILL, WARNING TAPE, TRACER WIRE, PRESSURE TESTING, DISINFECTION, SUBGRADE, BASE PRIME COAT, REINFORCEMENT, HMAC OPERATIONS, CONCRETE OPERATIONS, ETC.
42. ALL BACKFILL UNLESS OTHERWISE SPECIFIED SHALL BE DONE IN 12" LIFTS, COMPACTED TO 95% OF ASTM D1557,+/- 2% OPTIMAL MOISTURE CONTENT.
43. ELEVATIONS, COORDINATES, AND DIMENSIONS SHOWN ARE APPROXIMATE AND BASED ON FIELD SURVEY DATA. THROUGHOUT CONSTRUCTION COORDINATE WITH ENGINEER TO ENSURE ALL REQUIREMENTS, REGULATIONS, AND DESIGN INTENT ARE MET. CONTRACTOR IS SOLELY RESPONSIBLE IN MEETING THE DESIGN INTENT.
44. WHERE VALVE BOXES ARE IN CLOSE PROXIMITY CONCRETE COLLAR SHALL BE A SINGLE MONOLITHIC POUR THAT CONNECTS ALL VALVE BOXES.
45. PIPE WITHIN CASING SHALL BE INTEGRAL RESTRAINED (CERTALOK OR APPROVED EQUAL).

LIST OF UTILITIES AND AGENCIES

CITY OF MIDLAND
300 N. LORAINE
MIDLAND, TX 79701
OFFICE: (432) 685-7100
MR. CARL CRAIGO, P.E.

TXDOT
5100 I-20 NSR
MIDLAND, TX 79703
(432) 694-2195

ENGINEER
PARKHILL
1700 WEST WALL STREET
MIDLAND, TX 79701
(432) 697-1447
MR. KOLE T. GLOVER, P.E.

MIDLAND COUNTY
2435 E HIGHWAY 80
MIDLAND, TX 79706
(432) 688-4155

XCEL ENERGY
414 NICOLLET MALL
MINNEAPOLIS, MN 55401-1933
(800) 628-2121

ATMOS ENERGY
PO BOX 650205
DALLAS, TX 75265
(888) 286-6700

CENTURION PIPELINE
5 GREENWAY PLAZA, SUITE 1600
HOUSTON, TX 77046
(346) 803-2800

TEXAS 811
11880 GREENVILLE, SUITE 120
DALLAS, TX 75243
(800) 344-8377

PARKHILL CONTROL POINTS

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-1	10699903.180	1765690.069	2755.529	1/2" IRON ROD WITH CAP PSC CONTROL
CP-2	10699684.340	1766233.273	2755.159	1/2" IRON ROD WITH CAP PSC CONTROL
CP-3	10700483.673	1767477.784	2751.275	1/2" IRON ROD WITH CAP PSC CONTROL

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PROJECT NO.
2854.19

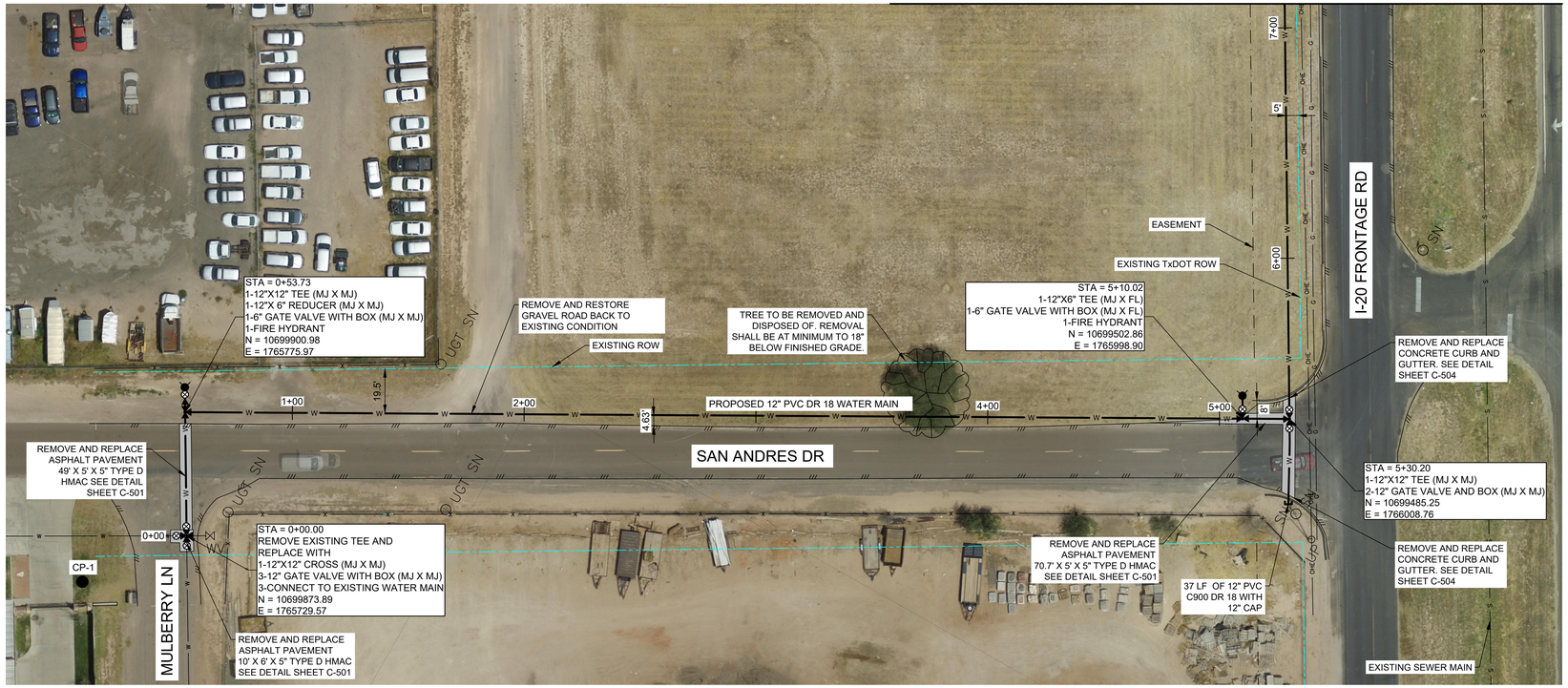
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3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

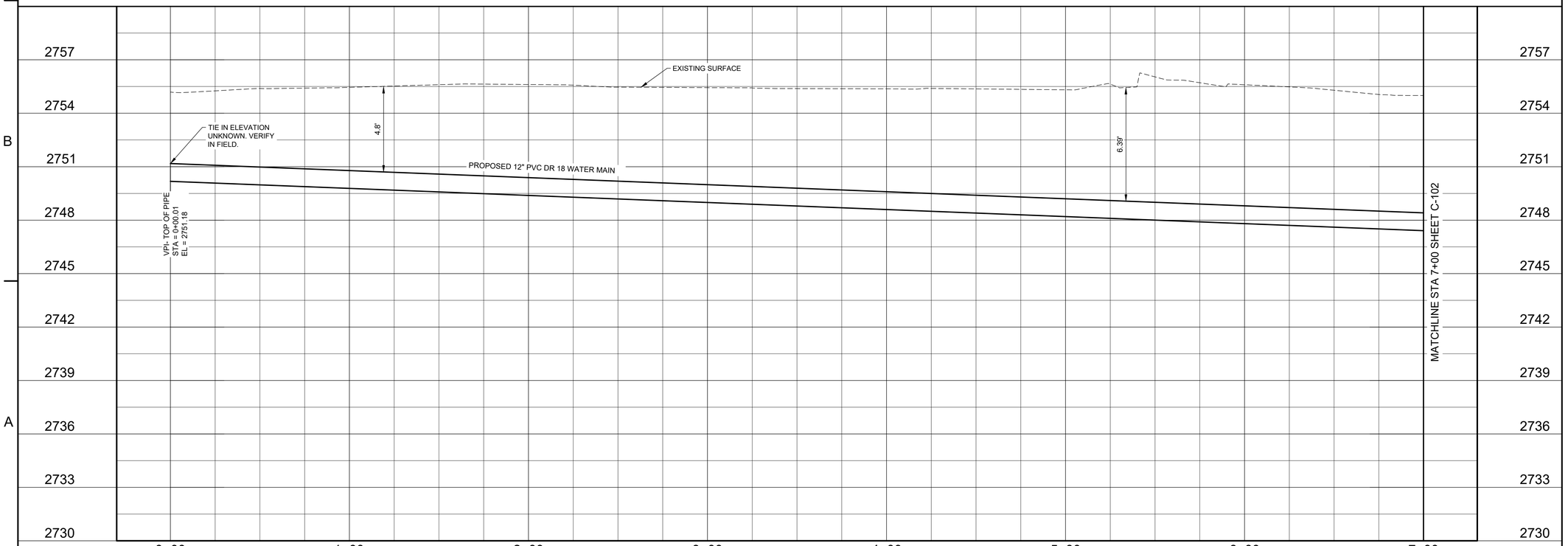
General Notes, Legend, Contact List and Control Points

G-003

PACKET
6.167
August 9, 2022

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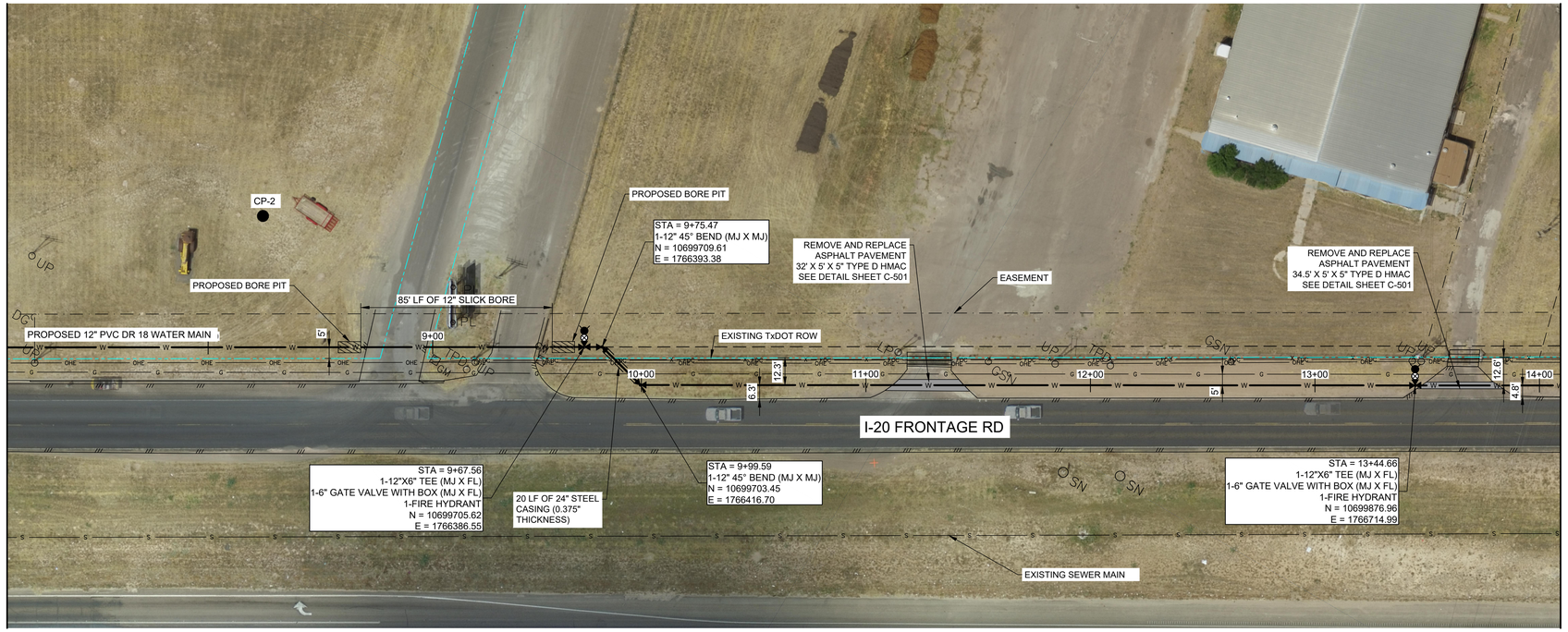
PROJECT NO.
2854.19

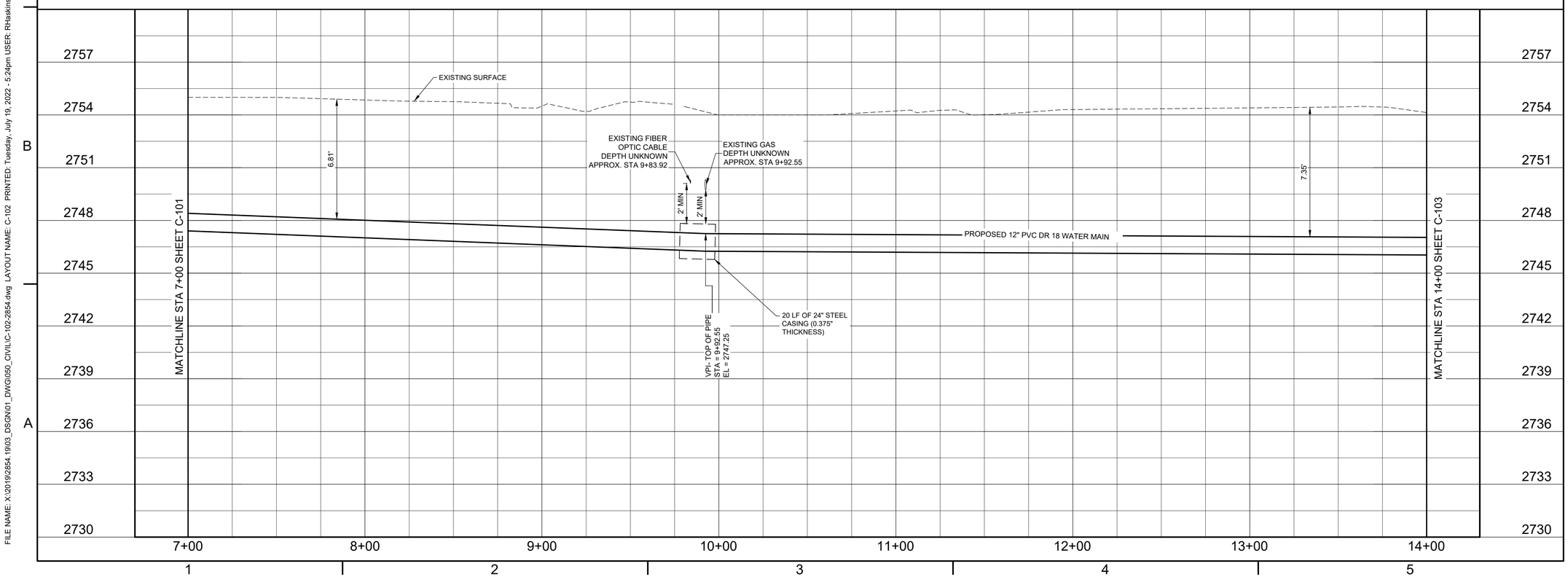
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4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

12" Water Main Plan and Profile STA 0+00 to STA 7+00

C-101

PACKET
6.168
August 9, 2022





HORZ SCALE 0 30' 60'

VERT SCALE 0 3' 6'

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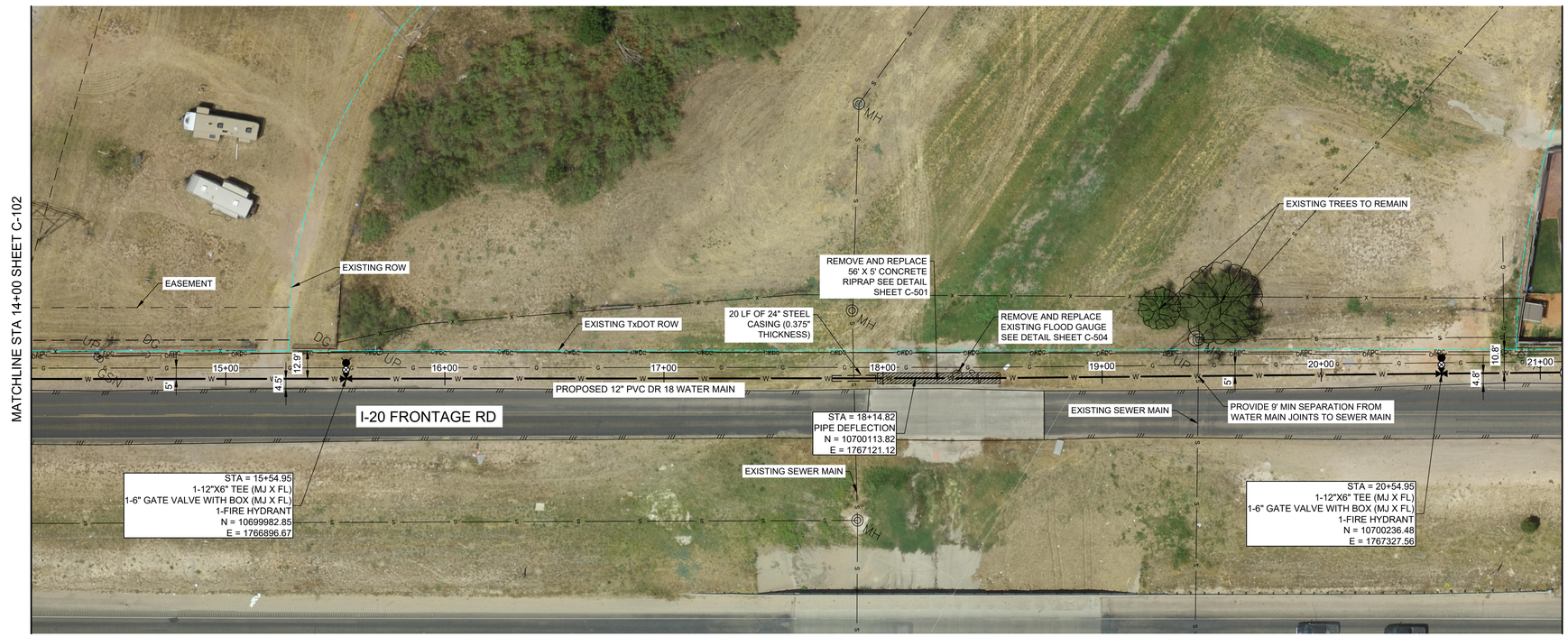
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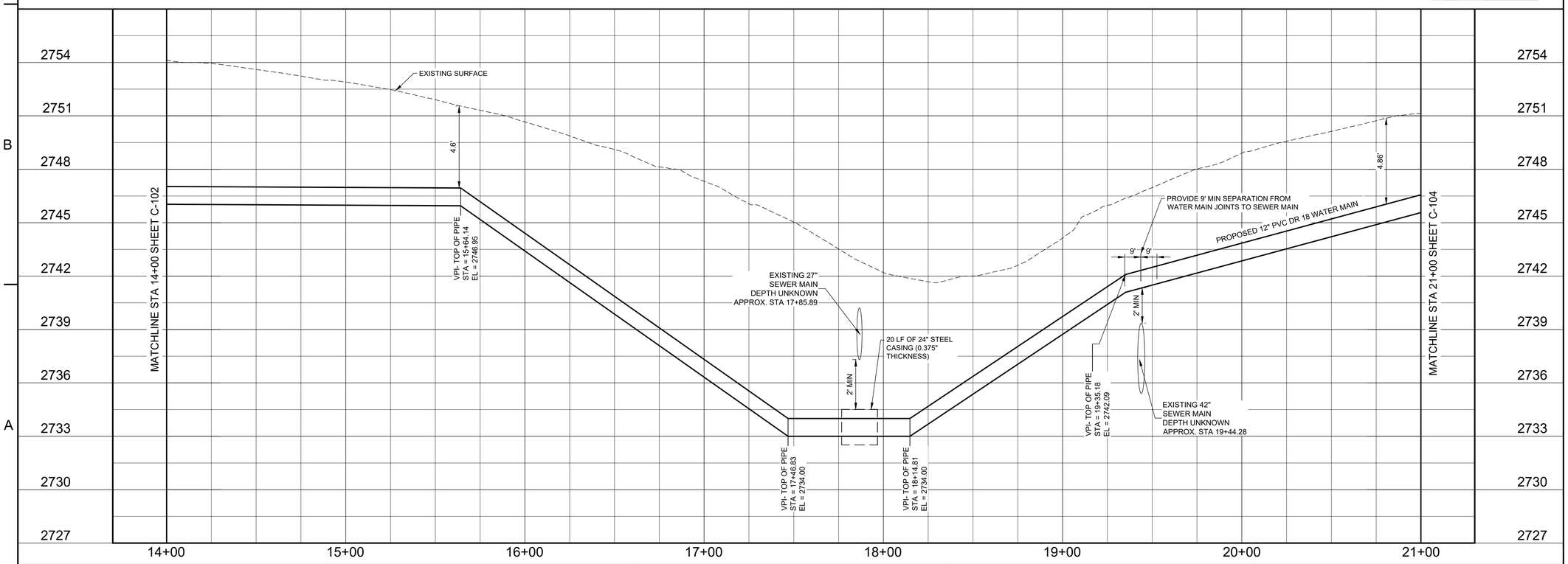
12" Water Main Plan and Profile STA 7+00 to STA 14+00

C-102

PACKET
6.169
August 9, 2022

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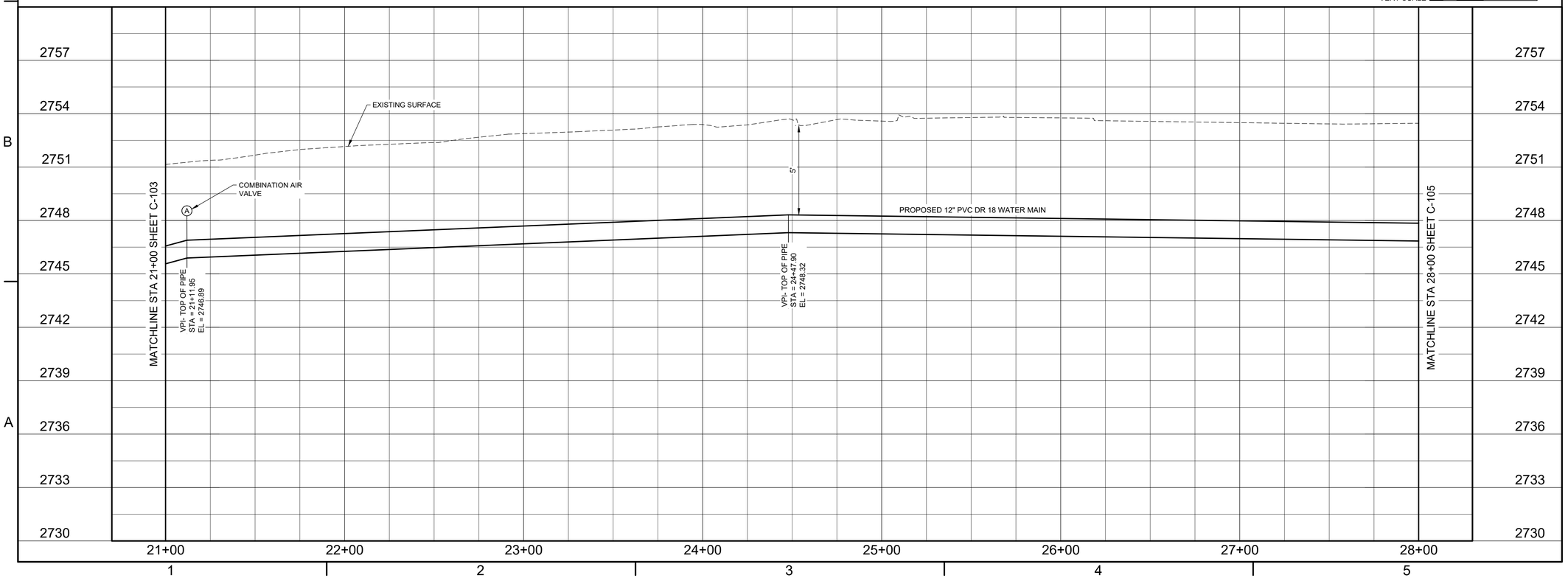
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4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

12" Water Main Plan and Profile STA 14+00 to STA 21+00

C-103

PACKET
6.170
August 9, 2022





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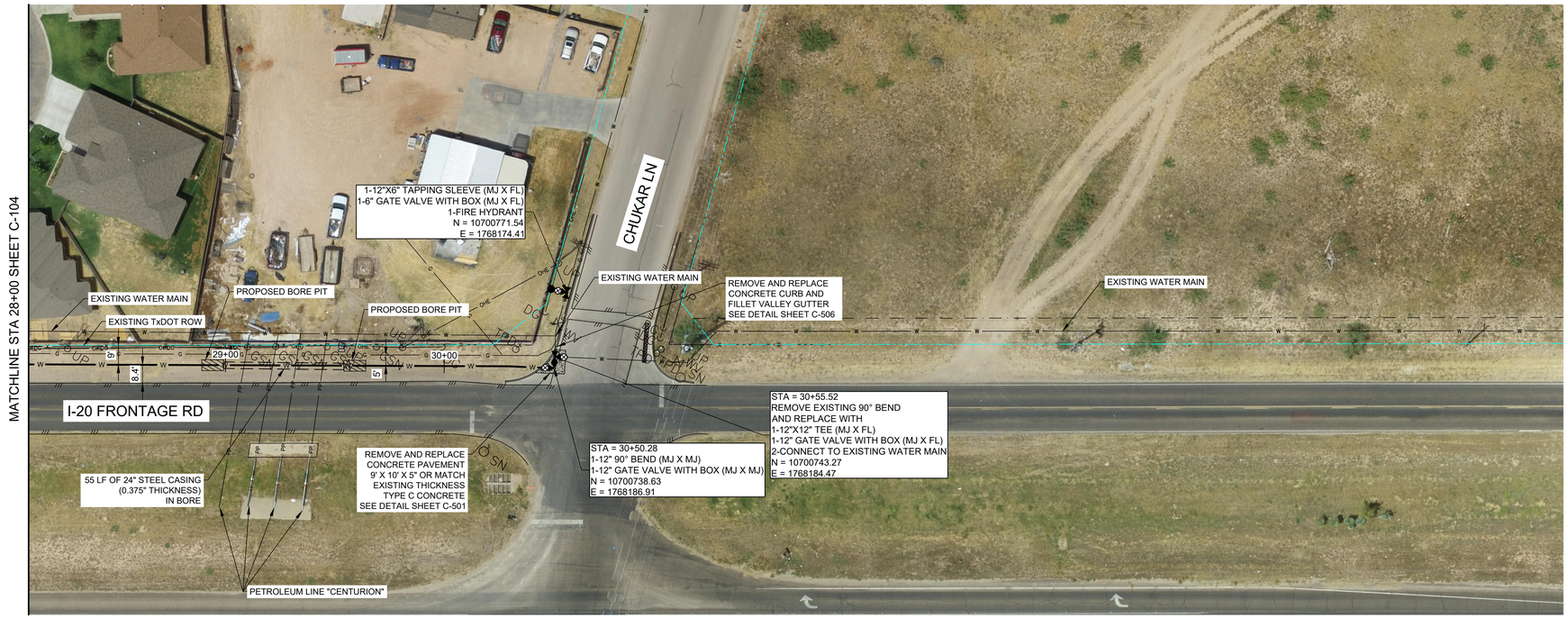
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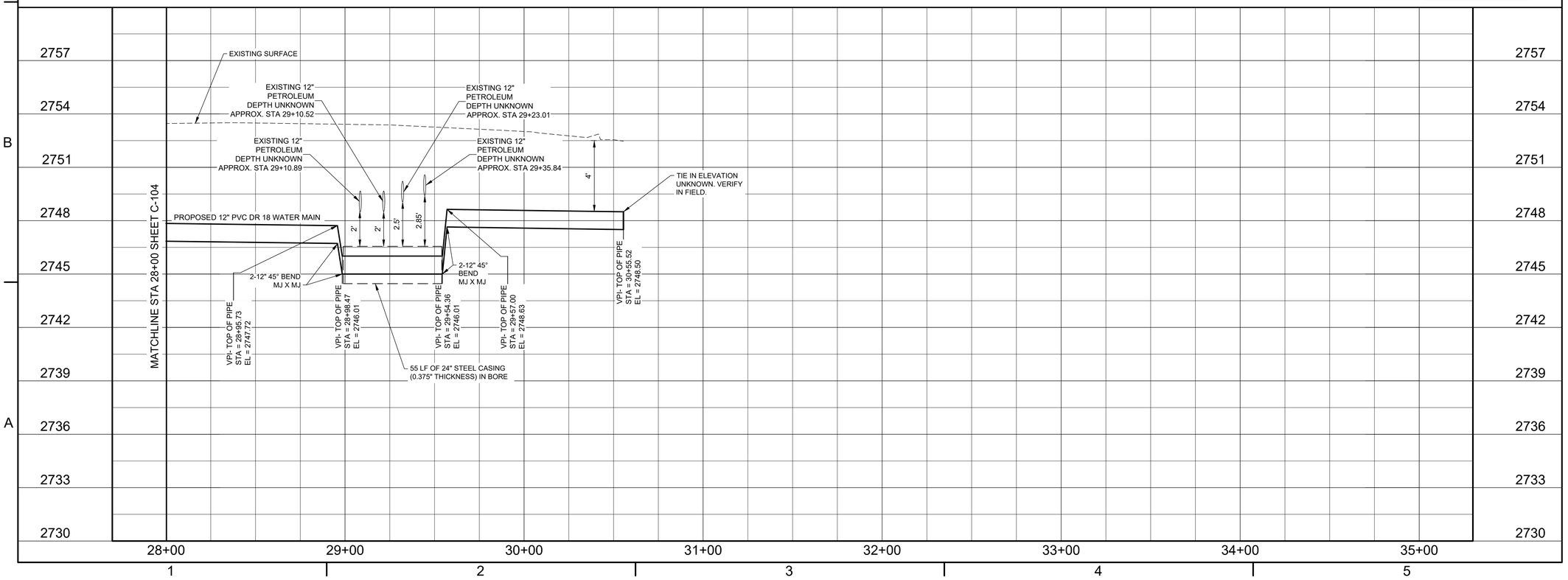
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4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

12" Water Main Plan and Profile STA 21+00 to STA 28+00

C-104





FILE NAME: X:\2019\2854.19\03_DSGN\01_DWG\050_CIVIL\C-105-2854.dwg LAYOUT NAME: C-105 PRINTED: Tuesday, July 19, 2022 - 5:30pm USER: RHaskins

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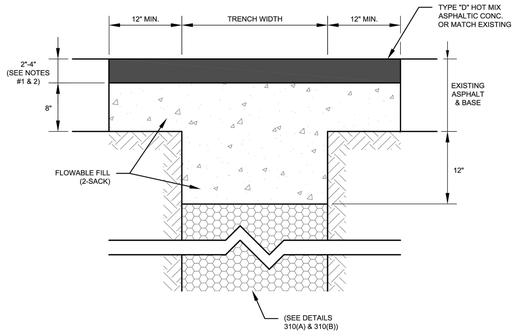
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12" Water Main Plan and Profile STA 28+00 to STA 30+55.52

C-105

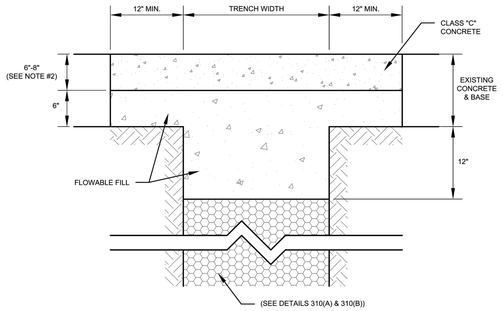
PACKET
6.172
August 9, 2022



NOTES:

1. ASPHALT PAVEMENT THICKNESS TO BE A MINIMUM OF 2" OR MATCH THE EXISTING ASPHALT THICKNESS IF IT IS GREATER THAN 2" THICK.
2. PLACE ASPHALT PAVEMENT IN MAXIMUM 2" LIFTS, 95% MODIFIED COMPACTION.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. EXTEND BOTH ASPHALT AND FLOWABLE FILL 12" BEYOND THE EDGE OF THE TRENCH ON BOTH SIDES.
5. SEE DETAILS 310(A) AND 310(B) REGARDING TRENCH BACKFILL REQUIREMENTS BENEATH THE FLOWABLE FILL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 311
	ASPHALT TRENCH PAVEMENT REPLACEMENT		

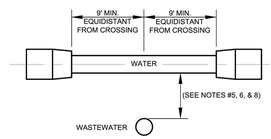


NOTES:

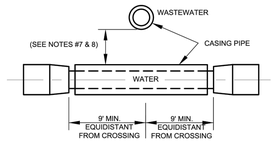
1. CONCRETE TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. CONCRETE PAVEMENT THICKNESS TO BE A MINIMUM OF 6" OR MATCH THE EXISTING CONCRETE THICKNESS IF IT IS GREATER THAN 6" THICK. CONCRETE PAVEMENT THICKNESS TO BE MINIMUM 8" FOR ARTERIAL PAVEMENT.
3. PLACE ALL FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT) AS A SINGLE CONTINUOUS POUR.
4. EXTEND BOTH CONCRETE AND FLOWABLE FILL 12" BEYOND THE EDGE OF THE TRENCH ON BOTH SIDES.
5. SEE DETAILS 310(A) AND 310(B) REGARDING TRENCH BACKFILL REQUIREMENTS BENEATH THE FLOWABLE FILL.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 312
	CONCRETE TRENCH PAVEMENT REPLACEMENT		

NEW WATER OVER WASTEWATER



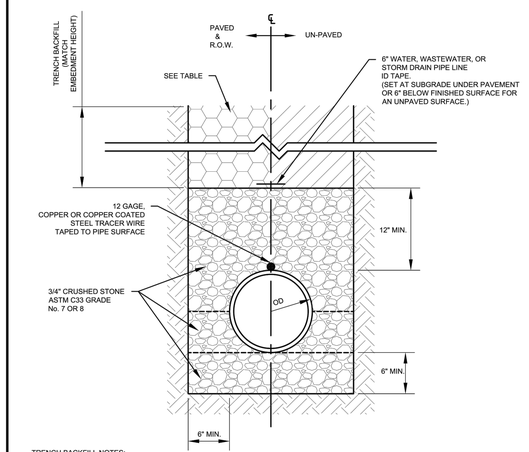
NEW WATER UNDER WASTEWATER



NOTES:

1. SEE CITY DETAIL 309 FOR NEW WASTEWATER MAIN REQUIREMENTS AT WATER MAIN CROSSINGS.
2. WASTEWATER MAINS AND MANHOLES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY.
3. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
4. CENTER NEW WATER MAIN PIPE SEGMENT ON CROSSING SO THAT ALL PIPE SEGMENT JOINTS ARE EQUIDISTANT AND AT LEAST 9.0' HORIZONTALLY FROM THE CENTERLINE OF THE CROSSING. NEW WATER MAIN IS TO CROSS WASTEWATER MAIN AT 90° ANGLE.
5. NEW WATER MAINS ARE TO HAVE NO LESS THAN 2.0' VERTICAL SEPARATION OVER THE OUTER EDGE OF ANY EXISTING NON-PRESSURE RATED WASTEWATER MAIN, AND NO LESS THAN 0.5' VERTICAL SEPARATION OVER THE OUTER EDGE OF ANY EXISTING PRESSURE-RATED (150 PSI) WASTEWATER MAIN.
6. VERTICAL SEPARATION DIMENSION REQUIREMENTS FOR NEW WATER MAINS CROSSING OVER NEW WASTEWATER MAINS ARE COVERED IN CITY DETAIL 309.
7. NEW WATER MAIN CROSSING BENEATH NEW OR EXISTING WASTEWATER MAIN TO HAVE NO LESS THAN 2.0' VERTICAL SEPARATION FROM WASTEWATER MAIN WITH MINIMUM 18.0' LONG PIPE ENCASEMENT CENTERED ON THE CROSSING. SEE CITY DETAIL 805 FOR PIPE CASING.
8. VERTICAL SEPARATION DIMENSIONS TO BE MEASURED FROM OUTER EDGE OF ALL PIPE ENCASEMENTS..
9. WHEN CROSSING AN EXISTING WASTEWATER MAIN AND IT IS DISTURBED OR SHOW SIGNS OF LEAKING, THE WASTEWATER MAIN MUST BE REPLACED AT LEAST 9.0' IN BOTH DIRECTIONS FROM THE CROSSING WITH AT LEAST 150 PSI PRESSURE-RATED PIPE EMBEDDED IN CEMENT STABILIZED SAND ENCASEMENT (2.5 SACKS / CUBIC YARD) FOR A TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 1.0' BEYOND THE JOINT ON EACH END.
10. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
11. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

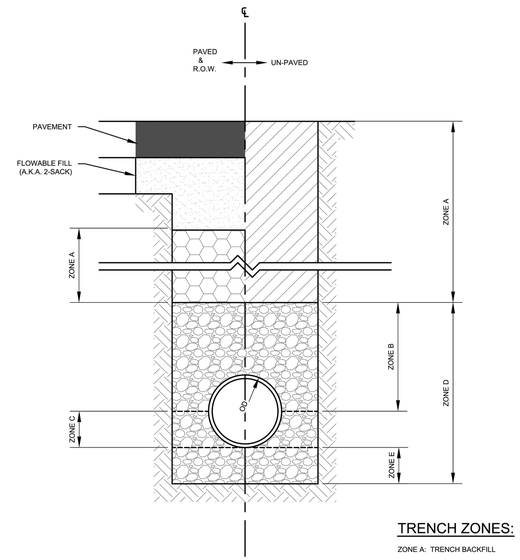
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 307
	NEW WATER MAIN CROSSING WASTEWATER MAIN		



TRENCH BACKFILL NOTES:

1. APPLIES TO ALL PIPE TYPES. (DUCTILE IRON, PVC, ETC.)
2. UTILIZE SELECT FILL BACKFILL BENEATH ALL PAVED SURFACES. NATIVE MATERIAL BACKFILL CAN ONLY BE USER FOR UNPAVED TRENCH CONDITIONS IF BACKFILL MATERIAL IS ≤ 30LL AND ≤ 15 PI.
3. NATIVE MATERIAL TO BE EXISTING EXCAVATED SOIL FROM TRENCH WITH ALL MATERIAL BROKEN DOWN ≤ 2".
4. MOISTURE CONDITION ALL BACKFILL MATERIAL PRIOR TO PLACING IN TRENCH.
5. PLACE TRENCH BACKFILL MATERIAL IN MAXIMUM 12" LOOSE LIFTS AND COMPACT TO MAXIMUM 8" COMPACTED LIFTS.
6. REFER TO CITY DETAILS 311 AND 312 FOR TRENCH PAVEMENT REPLACEMENT REQUIREMENTS.
7. PLACE LAYERS B, C, AND E FOUND ON CITY DETAIL 310(B) AS SEPARATE LAYERS.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 310(A)
	TRENCHING AND BEDDING		

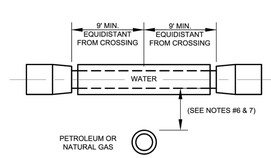


TRENCH ZONES:

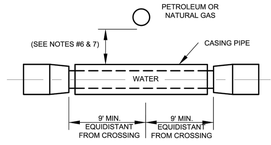
ZONE A: TRENCH BACKFILL
ZONE B: PIPE BACKFILL
ZONE C: HAUNCHING
ZONE D: PIPE EMBEDMENT
ZONE E: BEDDING

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 310(B)
	TRENCHING AND BEDDING		

NEW WATER OVER PETROLEUM & NATURAL GAS



NEW WATER UNDER PETROLEUM & NATURAL GAS



NOTES:

1. SEE CITY DETAIL 808 FOR NEW PETROLEUM OR NATURAL GAS LINE REQUIREMENTS AT WATER MAIN CROSSINGS. REQUIREMENTS FOR WATER MAINS CROSSING WITH PETROLEUM OR NATURAL GAS LINES ARE THE SAME AS WHEN THEY ARE CROSSING WASTEWATER MAINS UNLESS STATED OTHERWISE IN CITY DETAIL 808.
2. IF AN EXISTING PETROLEUM OR NATURAL GAS LINE PREDATES A PUBLIC ROW OR EASEMENT THAT THE WATER MAIN IS LOCATED IN THEN THE WATER MAIN DESIGN AND CONSTRUCTION MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS AS PER THE PETROLEUM OR NATURAL GAS LINE OWNER'S STANDARDS.
3. PETROLEUM OR NATURAL GAS LINES AND MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY.
4. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
5. CENTER NEW WATER MAIN PIPE SEGMENT ON CROSSING SO THAT ALL PIPE SEGMENT JOINTS ARE EQUIDISTANT AND AT LEAST 9.0' HORIZONTALLY FROM THE CENTERLINE OF THE CROSSING. WATER MAIN TO CROSS PETROLEUM OR NATURAL GAS LINE AT 90° ANGLE.
6. NEW WATER MAIN CROSSING OVER OR BENEATH NEW OR EXISTING PETROLEUM OR NATURAL GAS LINES TO BE ENCASED IN MINIMUM 18'.0' LONG PIPE ENCASEMENT CENTERED ON THE CROSSING. SEE CITY DETAIL 805 FOR PIPE CASING. VERTICAL SEPARATION FROM OUTER EDGE OF PETROLEUM OR NATURAL GAS LINES TO BE NO LESS THAN 2.0'.
7. VERTICAL SEPARATION DIMENSIONS TO BE MEASURED FROM OUTER EDGE OF ALL PIPE ENCASEMENTS.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
MIDLAND Engineering Services	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL: 308
	NEW WATER MAIN CROSSING PETROLEUM AND NATURAL GAS LINE		

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07-19-2022

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PROJECT NO.
2854.19

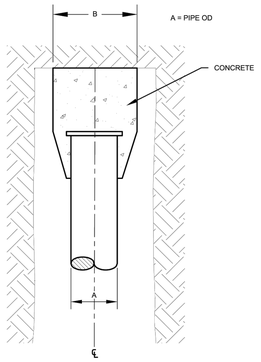
#	DATE	DESCRIPTION
4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

Miscellaneous Water Details

C-501

PACKET
6.173
August 9, 2022

FILE NAME: X:\2019\2854.19\03_DSGN\01_DWG\050_CIVIL\C-501-2854.dwg LAYOUT NAME: C-501 PRINTED: Tuesday, July 19, 2022 - 4:58pm USER: RHaskins



CAP BLOCKING

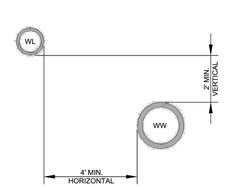
PIPE OD A	BLOCKING DIMENSIONS	
	B	*C
4"	1'-0"	1'-0"
6"	1'-7"	1'-0"
8"	2'-2"	2'-2"
10"	2'-8"	2'-8"
12"	3'-2"	3'-2"
14"	3'-8"	3'-8"
16"	4'-3"	4'-3"

*C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH

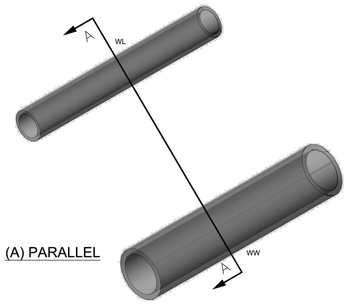
NOTES:

1. CAP ALL WATER MAIN STUB OUTS.
2. FORM ALL CONCRETE THRUST BLOCKING . DO NOT PLACE UN-FORMED THRUST BLOCKING.
3. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
4. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
5. THRUST BLOCKING DESIGN TO BE PROVIDED IN CONSTRUCTION DRAWINGS FOR PIPES LARGER THAN 16" DIAMETER.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	BLOCKING FOR CAP		617
APPROVED: MCC			



SECTION 'A-A'



(A) PARALLEL

NOTES:

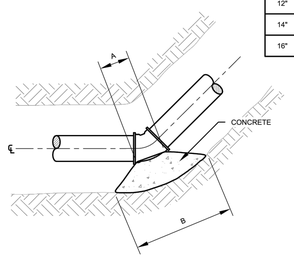
1. SEE CITY DETAIL 807 FOR NEW PETROLEUM OR NATURAL GAS LINE REQUIREMENTS WHEN IN PARALLEL WITH A WATER MAIN. REQUIREMENTS FOR WATER MAINS IN PARALLEL WITH PETROLEUM OR NATURAL GAS LINES ARE THE SAME AS WHEN THEY ARE PARALLEL WITH WASTEWATER MAINS UNLESS STATED OTHERWISE IN CITY DETAIL 807.
2. IF AN EXISTING PETROLEUM OR NATURAL GAS LINE PREDATES A PUBLIC ROW OR EASEMENT THAT THE WATER MAIN IS LOCATED IN THEN THE WATER MAIN DESIGN AND CONSTRUCTION MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS AS PER THE PETROLEUM OR NATURAL GAS LINE OWNER'S STANDARDS.
3. WASTEWATER MAINS AND MANHOLES MUST BE LOCATED AT LEAST 9.0' FROM ALL WATER MAINS IN ALL DIRECTIONS. IF THIS IS NOT POSSIBLE THEN AN ENGINEERING REPORT IS REQUIRED PER TAC TO JUSTIFY WHY, AND THE REQUIREMENTS OF THIS DETAIL WILL APPLY. THIS DETAIL IS INTENDED TO COMPLY WITH TAC 217.53(d) AND TAC 290.44(e). IF TAC AND THIS DETAIL DIFFER THEN THE MORE RESTRICTIVE STANDARD GOVERNS.
4. WHERE WATER MAINS ARE LOCATED IN PARALLEL WITH NEW WASTEWATER MAINS, WASTEWATER MAINS MUST BE CONSTRUCTED AT LEAST 150 PSI PRESSURE CLASS, CORROSION RESISTANT, NON-BRITTLE PIPE SUCH AS CIP, DIP, OR PVC PIPE THAT IS DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE. EXISTING WASTEWATER MAINS IN PARALLEL THAT ARE LEAKING OR ARE DISTURBED AND THEN BEGIN TO LEAK MUST BE REPLACED WITH 150 PSI PRESSURE-RATED PIPE.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	PARALLEL WATER & WASTEWATER SPACING		306
APPROVED: MCC			

BLOCKING FOR HORIZONTAL BENDS
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

DIA. OF PIPE	DEGREE OF BEND											
	11 1/4°			22 1/2°			45°			90°		
	A	B	*C	A	B	*C	A	B	*C	A	B	*C
4"	0'-4"	1'-0"	1'-0"	0'-5"	1'-0"	1'-0"	0'-8"	1'-0"	1'-0"	0'-11"	1'-3"	1'-3"
6"	0'-7"	1'-0"	1'-0"	0'-7"	1'-0"	1'-0"	0'-8"	1'-5"	1'-5"	1'-3"	1'-11"	1'-11"
8"	0'-8"	0'-10"	1'-2"	0'-9"	1'-4"	1'-4"	0'-10"	1'-10"	1'-10"	1'-6"	2'-6"	2'-6"
10"	0'-10"	1'-0"	1'-5"	0'-11"	1'-8"	1'-8"	1'-1"	2'-4"	2'-4"	1'-11"	3'-2"	3'-2"
12"	1'-0"	1'-3"	1'-8"	1'-1"	2'-0"	2'-0"	1'-3"	2'-10"	2'-10"	2'-2"	3'-10"	3'-10"
14"	0'-11"	1'-5"	1'-11"	1'-1"	2'-4"	2'-4"	1'-3"	3'-3"	3'-3"			
16"	1'-1"	1'-8"	2'-2"	1'-2"	2'-8"	2'-8"	1'-5"	3'-9"	3'-9"			

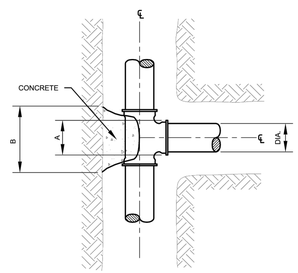
*C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH



NOTES:

1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTING TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	BLOCKING FOR HORIZONTAL BENDS		616
APPROVED: MCC			



TEE

"T" BLOCKING
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

"T" RUN DIA.	STEM DIA.	BLOCKING DIMENSIONS		
		A	B	*C
TEE				
4"	ALL	11"	1'-0"	1'-0"
6"	ALL	1'-2"	1'-7"	1'-0"
8"	ALL	1'-4"	2'-2"	2'-2"
10"	ALL	1'-8"	2'-8"	2'-8"
1'-0"	THRU 6"	1'-10"	1'-10"	1'-8"
1'-0"	OVER 6"	1'-10"	3'-2"	3'-2"
1'-2"	THRU 8"	2'-2"	2'-2"	1'-11"
1'-2"	OVER 8"	2'-2"	3'-8"	3'-8"
1'-4"	THRU 8"	2'-4"	2'-4"	2'-2"
1'-4"	OVER 8"	2'-4"	4'-3"	4'-3"

*C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH

NOTE:

1. FORM ALL CONCRETE THRUST BLOCKING. DO NO PLACE UN-FORMED THRUST BLOCKING.
2. BLOCKING FOR TEES LARGER THAN 16" RUN TO BE SHOWN ON THE PLANS.
3. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
4. FITTING TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
5. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
6. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	BLOCKING FOR TEE		615
APPROVED: MCC			

Parkhill

07-19-2022

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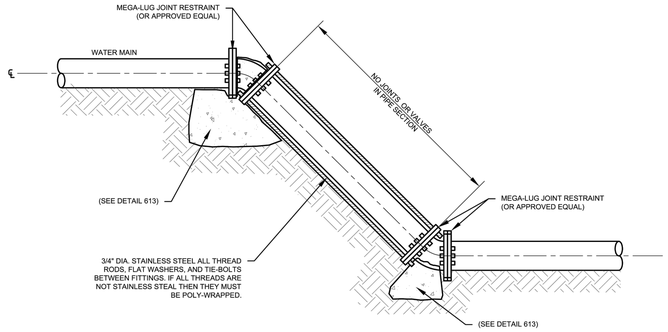
PROJECT NO.
2854.19

#	DATE	DESCRIPTION
4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

Miscellaneous Water Details

C-502

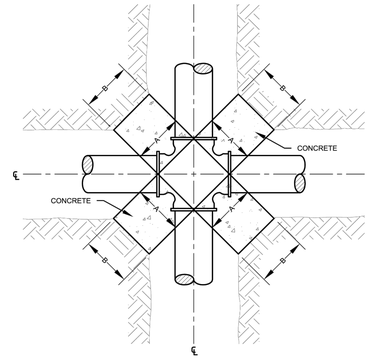
FILE NAME: X:\2019\2854.19\03_DSGN\01_DWG\050_CIVIL\C-502-2854.dwg LAYOUT NAME: C-502 PRINTED: Tuesday, July 19, 2022 - 5:05pm USER: RHaskins



NOTES:

1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
WATER MAIN VERTICAL OFFSET			DETAIL: 612



CROSS BLOCKING

CROSS BLOCKING
DESIGN 180 PSI LINE PRESSURE
SOIL BEARING CAP 2K/SF

CROSS DIA.	BLOCKING DIMENSIONS		
	A	B	*C
4"x 4"	0'-11"	1'-0"	1'-0"
6"x 6"	1'-2"	1'-7"	1'-0"
8"x 8"	1'-4"	2'-2"	2'-2"
10"x 10"	1'-8"	2'-8"	2'-8"
12"x 12"	1'-10"	3'-2"	3'-2"
14"x 14"	2'-2"	3'-8"	3'-8"
16"x 16"	2'-4"	4'-3"	4'-3"

*C - VERTICAL DEPTH OF CONCRETE BEARING ON UNDISTURBED EARTH

NOTES:

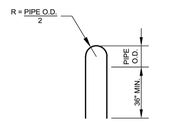
1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING
2. BLOCK CROSSES WITH DIFFERENT SIZE RUNS FOR THE LARGER RUN IN ALL DIRECTIONS.
3. BLOCKING FOR CROSSES LARGER THAN 16" WILL BE AS SHOWN ON THE PLANS.
4. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
5. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
BLOCKING FOR CROSS			DETAIL: 614

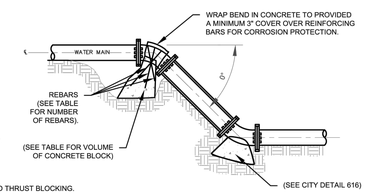
DIA. OF PIPE	DEGREE OF BEND θ							
	11 1/4°		22 1/2°		45°		90°	
	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE	VOLUME BLOCK	REBAR NO. SIZE
4"	3 C.F.	2-#3	6 C.F.	2-#3	12 C.F.	2-#3	22 C.F.	2-#3
6"	7 C.F.	2-#3	13 C.F.	2-#3	26 C.F.	2-#3	1.0 C.Y.	2-#3
8"	12 C.F.	2-#3	24 C.F.	2-#3	2.0 C.Y.	2-#4	3.0 C.Y.	2-#4
10"	19 C.F.	2-#3	1.5 C.Y.	2-#4	3.0 C.Y.	2-#4	5.0 C.Y.	2-#6
12"	1.0 C.Y.	2-#3	2.0 C.Y.	2-#4	4.0 C.Y.	2-#6	7.0 C.Y.	2-#8
14"	1.5 C.Y.	2-#4	3.0 C.Y.	2-#4	5.5 C.Y.	2-#6	*	*
16"	2.0 C.Y.	2-#4	3.5 C.Y.	2-#4	7.0 C.Y.	2-#7	*	*

BLOCK FOR EXTERNAL VERTICAL BENDS
DESIGN PRESSURE 180 PSI

* BLOCKING FOR 14" AND 16" 90° BENDS AND FOR ALL BENDS LARGER THAN 16" WILL BE SHOWN ON THE PLANS.



BAR BEND DETAIL

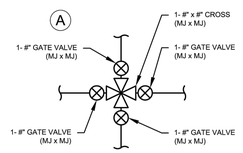


NOTES:

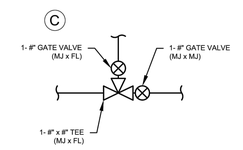
1. FORM ALL CONCRETE THRUST BLOCKING. DO NOT PLACE UN-FORMED THRUST BLOCKING.
2. ALL THRUST BLOCKING TO BE CLASS "A" CONCRETE, 3000 PSI, AND TO BE PLACED AGAINST UNDISTURBED EARTH. USE FIBER REINFORCEMENT THROUGHOUT.
3. FITTINGS TO BE POLY WRAPPED BEFORE BLOCKING IS PLACED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
BLOCKING FOR VERTICAL BEND			DETAIL: 613

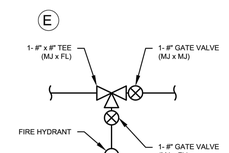
CROSS FITTING RESTRAINTS



TEE FITTING RESTRAINTS



FIRE HYDRANT RESTRAINTS



NOTES:

1. ALL MECHANICAL JOINT (MJ) FITTINGS TO BE RESTRAINED.
2. ALL FLANGES (FL) TO BE ON THE BRANCH SIDE OF TEE FITTINGS.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
TYPICAL FITTING RESTRAINT CONFIGURATIONS			DETAIL: 601

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Midland, Texas 79701-4725
(432) 686-1600

PROJECT NO.
2854.19

#	DATE	DESCRIPTION
4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

Miscellaneous Water Details

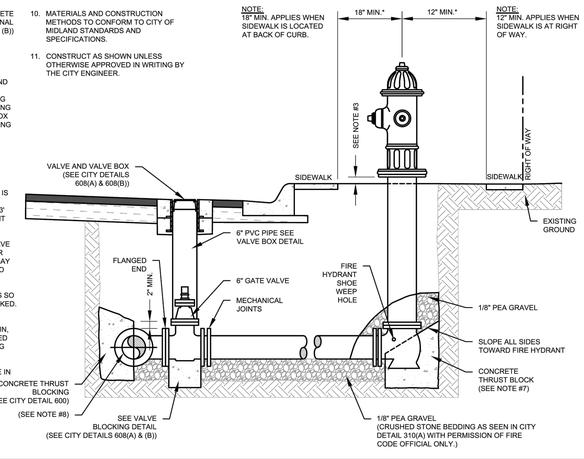
C-503

PACKET
6.175
August 9, 2022

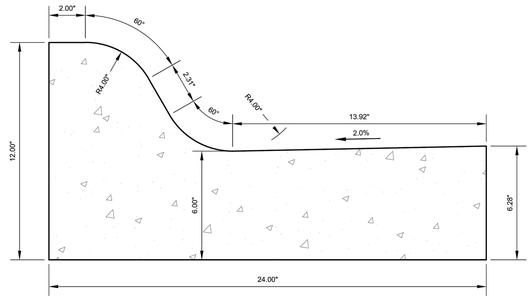
FILE NAME: X:\2019\2854.19\03_DSGN\01_DWG\050_CIVIL\C-503-2854.dwg LAYOUT NAME: C-503 PRINTED: Tuesday, July 19, 2022 - 5:07pm USER: RHaskins

NOTES:

1. SET ALL VALVE BOXES IN A CONCRETE COLLAR WHEN PLACED AT THEIR FINAL GRADE. (SEE CITY DETAILS 608(A) & (B))
2. ALL CONCRETE PAVEMENT TO BE CLASS "C" CONCRETE, 3600 PSI.
3. LEAVE VALVE BOX 6" TO 10" ABOVE GRADE FOR NEW DEVELOPMENT AND OTHER STREETS AND ALLEYS SCHEDULED FOR IMMEDIATE PAVING UNTIL STREET WORK IS DONE. PAVING CONTRACTOR TO ADJUST VALVE BOX TO FINISHED GRADE BEFORE PLACING LAST COURSE OF HMAC SURFACE.
4. SET FRANGIBLE FLANGE OF FIRE HYDRANT A MINIMUM OF 2" AND A MAXIMUM OF 6" ABOVE SIDEWALK ELEVATION.
5. ON STREETS WHERE NO SIDEWALK IS TO BE CONSTRUCTED, SET CENTERLINE OF FIRE-HYDRANT AT 3' FROM PROPERTY LINE WITHIN RIGHT OF WAY.
6. PLACE FIRE HYDRANT CUT-OFF VALVE A MINIMUM OF 3' FROM THE CENTER LINE OF THE FIRE HYDRANT. THIS MAY REQUIRE THE USE OF A 90° BEND TO OFFSET THE FIRE HYDRANT.
7. SHAPE CONCRETE THRUST BLOCKS SO THAT NO WATER DRAINS ARE BLOCKED.
8. A TEE FITTING IS REQUIRED FOR A CONNECTION TO A NEW WATER MAIN, AND A TAPPING SLEEVE IS REQUIRED FOR A CONNECTION TO AN EXISTING WATER MAIN.
9. DO NOT WRAP FIRE HYDRANT SHOE IN PLASTIC.
10. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
11. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.



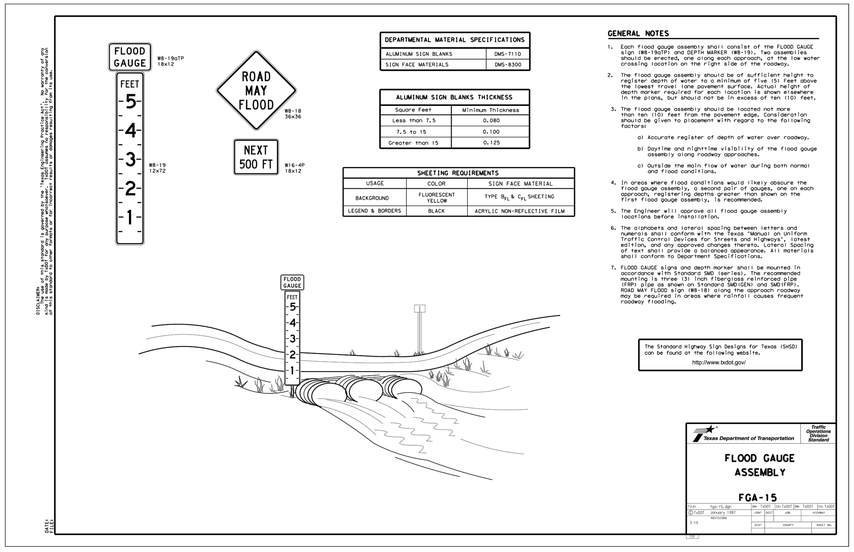
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	FIRE HYDRANT NEW WATER MAIN		603
APPROVED: MCC			



NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. SEAL CONCRETE JOINT AT FACE OF CURB WHEN ADJACENT TO CONCRETE PAVEMENT AND NOT INTEGRAL WITH THAT PAVEMENT.
3. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
4. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	TYPE A STANDARD CURB AND GUTTER		205
APPROVED: MCC			



DEPARTMENTAL MATERIAL SPECIFICATIONS

ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

ALUMINUM SIGN BLANKS THICKNESS

Square Feet	Minimum Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

SHEETING REQUIREMENTS

USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	FLUORESCENT YELLOW	TYPE R_{A3} & C_{A4} SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM

GENERAL NOTES

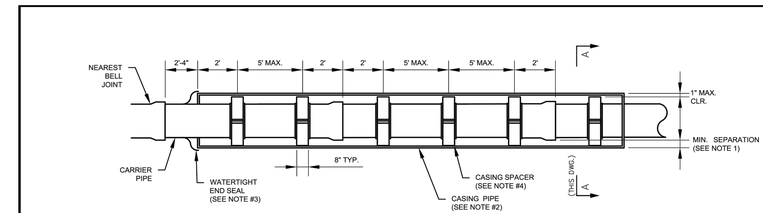
1. Each flood gauge assembly shall consist of the FLOOD GAUGE sign (W8-19bTP) and DEPTH MARKER (W8-19). Two assemblies should be erected, one along each approach, at the low water crossing location on the right side of the roadway.
2. The flood gauge assembly should be of sufficient height to register depth of water to a minimum of five (5) feet above the lowest travel lane pavement surface. Actual height of depth marker required for each location is shown elsewhere in the plans, but should not be in excess of ten (10) feet.
3. The flood gauge assembly should be located not more than ten (10) feet from the pavement edge. Consideration should be given to placement with regard to the following factors:
   a) Accurate register of depth of water over roadway.
   b) Daytime and nighttime visibility of the flood gauge assembly along roadway approaches.
   c) Outside the main flow of water during both normal and flood conditions.
4. In areas where flood conditions would likely obscure the flood gauge assembly, a second pair of gauges, one on each approach, registering depths greater than shown on the first flood gauge assembly, is recommended.
5. The Engineer will approve all flood gauge assembly locations before installation.
6. The alphabets and lateral spacing between letters and numerals shall conform with the Texas "Manual on Uniform Traffic Control Devices for Streets and Highways", latest edition, and any approved changes thereto. Lateral spacing of text shall provide a balanced appearance. All materials shall conform to Department Specifications.
7. FLOOD GAUGE signs and depth-marker shall be mounted in accordance with Standard SMD (series). The recommended mounting is three (3) inch fiberglass reinforced pipe. (See Standard SMD (FIBER) Standard SMD (SIGN) and SMD(WFBP)). ROAD MAY FLOOD sign (W8-18) shall also be mounted ahead, may be required in areas where rainfall causes frequent roadway flooding.

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.
http://www.txdot.gov/

Texas Department of Transportation — Traffic Operations Standard

FLOOD GAUGE ASSEMBLY

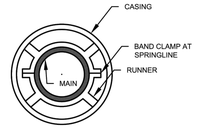
FGA-15



CROSS SECTION VIEW

NOTES:

1. CASING PIPE TO BE MINIMUM TWO (2) NOMINAL SIZES LARGER IN DIAMETER THAN CARRIER PIPE.
2. CASING PIPE TO BE NO LESS THAN 12" DIAMETER PIPE. 12"-16" DIAMETER CASING PIPE MAY BE STEEL OR PVC PIPE. CASING PIPE LARGER THAN 16" DIAMETER MUST BE STEEL PIPE. STEEL CASING PIPE TO BE MINIMUM 1/4" WALL THICKNESS. PVC CASING PIPE TO BE SDR-26 D2241 OR C-900.
3. CASING PIPE TO BE STEEL OR PVC.
4. WATER TIGHT END SEAL TO BE GROUT OR APPROVED MANUFACTURED SEAL.
5. CASING SPACERS TO BE HDPE OR APPROVED EQUAL, MINIMUM FOUR (4) EQUALLY SPACED RUNNERS, WITH BAND CLAMP JOINT LOCATED AT SPRINGLINE. SPACERS FOR CASING PIPE LARGER THAN 24" DIAMETER REQUIRE MINIMUM SIX (6) EQUALLY SPACED RUNNERS.
6. CASING INSTALLED IN OPEN TRENCH IS TO BE BACKFILLED PER CURRENT CITY STANDARDS FOR AN UN-ENCASED MAIN.
7. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
8. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.



SECTION 'A-A'

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	TYPICAL PIPE CASING DETAIL		805
APPROVED: MCC			

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07-19-2022

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Midland, Texas 79701-4725
(432) 686-1600

PROJECT NO.
2854.19

#	DATE	DESCRIPTION
4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

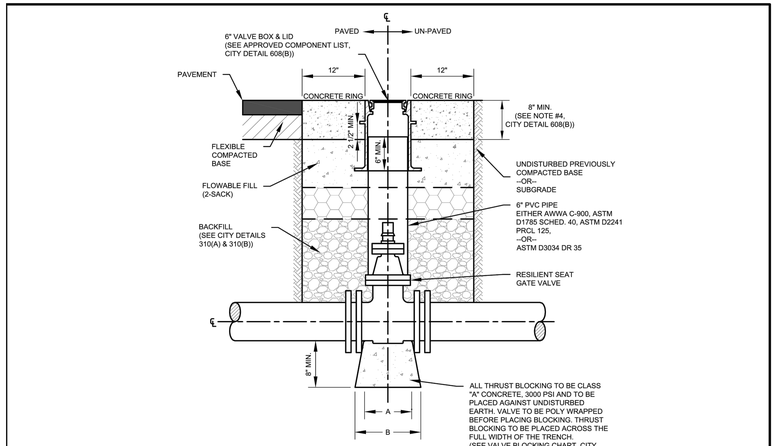
Miscellaneous Water Details

C-504

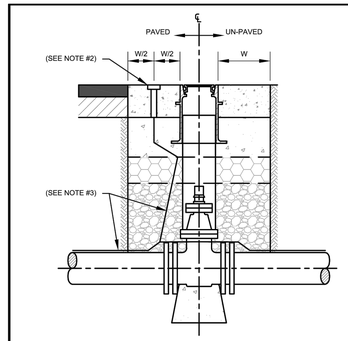
PACKET
6.176
August 9, 2022

FILE NAME: X:\2019\2854.19\03_DSGN\01_DWG\050_CIVIL\C-504-2854.dwg LAYOUT NAME: C-504 PRINTED: Tuesday, July 19, 2022 - 5:11pm USER: RHaskins

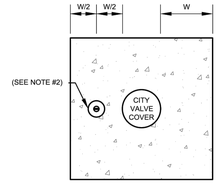
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MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
TYPICAL VALVE AND VALVE BOX			DETAIL: 608(A)



CROSS SECTION VIEW



PLAN VIEW

NOTES:

1. SEE OTHER CITY STANDARD DETAILS FOR INFORMATION REGARDING VALVES, COVERS, CONCRETE RINGS, ETC.
2. TRAFFIC RATED COPPERHEAD SNAKEPIT TEST STATION OR APPROVED EQUAL. SET FLUSH WITH FINISHED SURFACE OF CONCRETE RING.
3. TRACER WIRE PER DETAIL 310 (A) TO BE TAPED TO SIDE OF VALVE BOX AND FASTENED SECURELY TO END OF TEST STATION. TRACER WIRE TO REMAIN ENTIRELY COVERED.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
VALVE DETECTOR WIRE END			DETAIL: 320

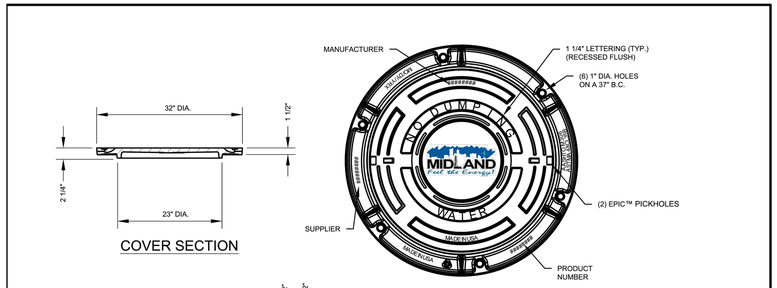
APPROVED COMPONENT LIST			
NO.	VALVES	VALVE COVERS	VALVE BOX
1	MUELLER 2360 M/J	MUELLER 2360 FL X FL	BASS & HAYS STANDARD 390-1 "SHORTY"
2	M & H 4067 M/J	M & H 4067-0	OR APPROVED EQUAL
3	CL0W 2838 M/J	CL0W 2840 FL X FL	
4	OR APPROVED EQUAL	OR APPROVED EQUAL	

VALVE BLOCKING CHART		
PIPE SIZE	A	B
4"	5.0"	10.5"
6"	6.5"	1'-.0"
8"	6.5"	1'-.0"
10"	8.0"	1'-1.0"
12"	8.5"	1'-2.0"

NOTES:

1. FOR VALVES ON WATER MAIN PIPES LARGER THAN 12" SEE CITY DETAIL 609.
2. SETTING VALVE BOX TO GRADE MAY REQUIRE ADDING PVC PIPE. IF ADDITIONAL PIPE IS REQUIRED, USE BELL SECTION WITH GASKET AND SET BELL DOWN OVER EXISTING PIPE RISER. A GASKETED SELF CENTERING COLLAR MAY BE USED IN LIEU OF THE BELL SECTION.
3. CONCRETE RING TO BE CITY OF MIDLAND CLASS "C", 3600 PSI, UNLESS OTHERWISE NOTED.
4. USE FIBER REINFORCEMENT FOR ALL CONCRETE , WHETHER PAVEMENT OR THRUST BLOCKING.
5. 12" MINIMUM FOR CONCRETE RING IN AN ARTERIAL ROADWAY.
6. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT.) REQUIRED BENEATH ALL CONCRETE RINGS.
7. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT.) REQUIRED FOR ALL OVER EXCAVATION BACKFILL.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
TYPICAL VALVE AND VALVE BOX DETAILS			DETAIL: 608(B)



NOTES:

1. MANHOLE COVERS TO BE CAST WITH THE FOLLOWING:
   "NO DUMPING"
   CITY OF MIDLAND LOGO
   "WATER"

   EAST JORDAN V1420Z1/V1430A ASSEMBLY OR APPROVED EQUAL
2. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

MIDLAND Engineering Services	DRAWN: DPM CHECKED: JCF APPROVED: MCC	EFFECTIVE DATE: 10/01/2018	SCALE: NTS
WATER HORIZONTAL & AIR RELIEF VALVE COVER			DETAIL: 611

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PROJECT NO.
2854.19

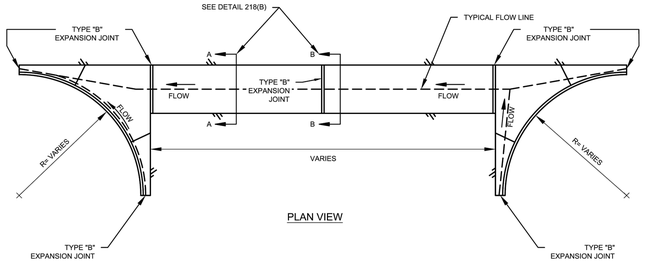
#	DATE	DESCRIPTION
4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

Miscellaneous Water Details

C-505

PACKET
6.177
August 9, 2022

FILE NAME: X:\2019\2854.19\03_DSGN\01_DWG\050_CIVIL\C-506-2854.dwg LAYOUT NAME: C-506 PRINTED: Tuesday, July 19, 2022 - 5:16pm USER: RHaskins

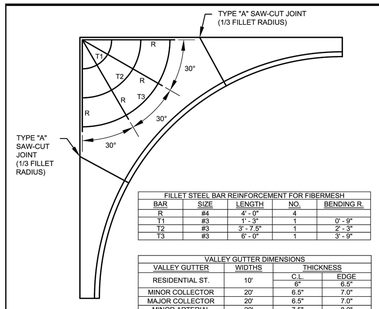


PLAN VIEW

NOTES:

1. CONCRETE TO BE CITY OF MIDLAND CLASS "C", 3600 PSI. USE FIBER REINFORCED CONCRETE PAVEMENT THROUGHOUT.
2. CONCRETE FILLET AREA TO BE PLACED WITH INTEGRAL CURB.
3. SEAL ALL CONCRETE JOINTS.
4. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
5. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	FILLET AND VALLEY GUTTER		218(A)
APPROVED: MCC			

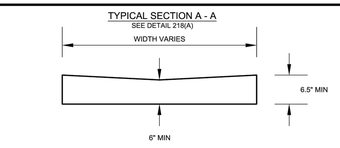


FILLET STEEL BAR REINFORCEMENT FOR FIBERMESH				
BAR	SIZE	LENGTH	NO.	BENDING R.
R	#4	4' - 0"	4	
T1	#3	1' - 3"	1	0' - 9"
T2	#3	3' - 7.5"	1	2' - 3"
T3	#3	6' - 0"	1	3' - 9"

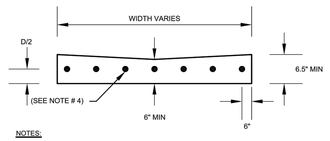
VALLEY GUTTER DIMENSIONS			
VALLEY GUTTER	WIDTHS	THICKNESS	
		C.L.	EDGE
RESIDENTIAL ST.	10'	6"	6.5"
MINOR COLLECTOR	20'	6.5"	7.0"
MAJOR COLLECTOR	20'	6.5"	7.0"
MINOR ARTERIAL	20'	7.5"	8.0"
MAJOR ARTERIAL	SEE PLANS		
VALLEY GUTTER WIDTH BASED ON CATEGORY OF STREET BEING CROSSED			

FILLET DIMENSIONS				
BACK OF CURB	FILLET AREAS (90°)			CURB LENGTH
RADIUS	COMPUTING R.	AREA S.F.	AREA S.Y.	L.F.
8	10	21.46	2.38	12.56
12	14	42.06	4.67	18.85
15	17	62.01	6.89	23.56
18	20	85.84	9.54	28.27
20	22	103.86	11.54	31.42
25	27	156.44	17.38	39.27
30	32	219.75	24.42	47.12
35	37	293.79	32.64	54.98
40	42	378.56	42.06	62.83
45	47	474.06	52.67	70.69
50	52	580.28	64.48	78.54

TYPICAL SECTION A - A
SEE DETAIL 218(A)



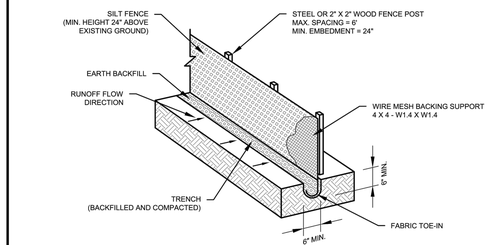
JOINT SECTION B - B
SEE DETAIL 218(A)



NOTES:

1. WHEN FILLET AREA IS TO BE PAVED WITH 8" THICK CONCRETE THE BOTTOM OF THE CURB AND GUTTER WILL BE EXTENDED TO MATCH THE FILLET THICKNESS.
2. USE FIBER REINFORCED CONCRETE THROUGHOUT VALLEY GUTTER.
3. STEEL BAR REINFORCEMENT TO BE USED IN FILLET, BUT NOT IN VALLEY GUTTER. STEEL BAR REINFORCEMENT TO BE PLACED AT THE BOTTOM 1/3 POINT OF SLAB CONCRETE ON GRADE AND TO HAVE A MINIMUM COVER OF 2" WHEN USED.
4. UTILIZE SMOOTH DOWEL RODS CENTERED ON THE VALLEY GUTTER JOINT, EVENLY SPACED AT 12' INTERVALS FOR THE FULL WIDTH OF THE VALLEY GUTTER.
5. SEAL ALL CONCRETE JOINTS.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

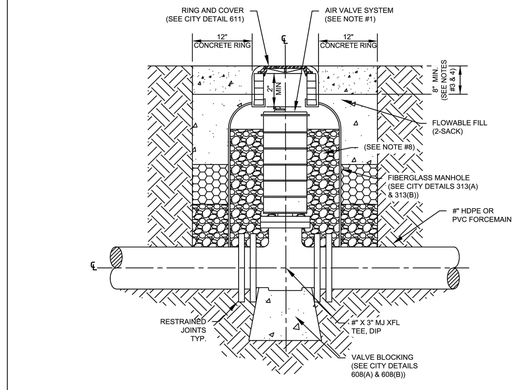
DRAWN: DPM	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
CHECKED: JCF	FILLET AND VALLEY GUTTER		218(B)
APPROVED: MCC			



NOTES:

1. THIS DETAIL IS TO BE USED FOR SHEET FLOW CONDITIONS ONLY. DO NOT USE SILT FENCE FOR POINT FLOW OR CONCENTRATED FLOW CONDITIONS.
2. INSTALL STEEL OR WOOD POSTS, WHICH SUPPORT THE SILT FENCE, WITH A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF ONE (1) FOOT.
3. TRENCH THE TOE OF THE SILT FENCE IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE THE FENCE CANNOT BE TRENCHED IN (E.G.PAVEMENT), WEIGHT DOWN FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
4. THE TRENCH MUST BE A MINIMUM OF SIX (6) INCHES DEEP AND SIX (6) INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
5. SECURELY FASTEN SILT FENCE TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS TO BE ATTACHED TO THE STEEL OR WOOD FENCE POST. INCLUDE A SIX (6) INCH DOUBLE OVERLAP, SECURELY FASTENED, WHERE ENDS OF FABRIC MEET.
6. REMOVE SILT FENCE WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. REMOVE ACCUMULATED SILT WHEN IT REACHES A DEPTH OF SIX (6) INCHES. DISPOSE OF THE SILT ONSITE IN AN APPROVED LOCATION AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
9. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

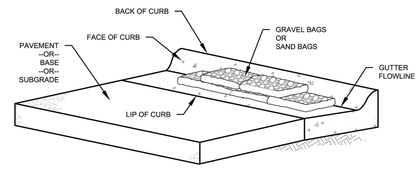
DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	SILT FENCE		706



NOTES:

1. USE AN A.R.I. D060CHF03SB-32-SSF 3" COMBINATION AIR VALVE, SUB-SURFACE, FLANGED INLET, SHORT, STAINLESS STEEL KNIFE GATE HOUSING OR APPROVED EQUAL FOR ALL AIR VALVE INSTALLATIONS.
2. EQUIP EACH AIR VALVE SYSTEM WITH A NON-SLAM, DISCHARGE THROTTLING ATTACHMENT (SLOW RELEASE ONE WAY ATTACHMENT).
3. CONCRETE RING TO BE CITY OF MIDLAND CLASS "C" CONCRETE, 3600 PSI.
4. 12" MINIMUM FOR CONCRETE RING IN AN ARTERIAL ROADWAY.
5. USE FIBER REINFORCEMENT FOR ALL CONCRETE, WHETHER PAVEMENT OR THRUST BLOCKING.
6. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT). REQUIRED BENEATH ALL CONCRETE RINGS.
7. FLOWABLE FILL 2-SACK (2 SACK = 188 LBS/CY, PORTLAND CEMENT). REQUIRED FOR ALL OVER EXCAVATION BACKFILL.
8. MAY BE EITHER PEA GRAVEL OR 3/4" CRUSHED STONE ASTM C33 GRADE N. 7 OR 8
9. MATERIAL AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
10. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: BRIARWOOD UTILITIES	SCALE: NTS	DETAIL:
	WATER AIR RELIEF VALVE		610



NOTES:

1. FILL BAGS TO 60% CAPACITY WITH EITHER CLEAN GRAVEL OR CLEAN SAND.
2. GRAVEL TO BE NO LESS THAN 1" DIAMETER OR GREATER THAN 2" DIAMETER.
3. PLACE BAGS WITH BAG OPENINGS SECURED AND FACE UP, AND SO THAT EACH BAG IS FLAT AND HAS THE GREATEST POSSIBLE SURFACE AREA CONTACT WITH THE CURB.
4. PLACE BAGS AGAINST THE FACE-OF-CURB AND DO NOT PLACE BAGS BEYOND THE LIP-OF-CURB.
5. DO NOT BLOCK ADA RAMPS OR WALKWAYS WITH BAGS.
6. MATERIALS AND CONSTRUCTION METHODS TO CONFORM TO CITY OF MIDLAND STANDARDS AND SPECIFICATIONS.
7. CONSTRUCT AS SHOWN UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

DRAWN: DPM	CHECKED: JCF	APPROVED: MCC	
	EFFECTIVE DATE: 10/01/2018	SCALE: NTS	DETAIL:
	CURB GRAVEL OR SAND BAGS		712

Parkhill

07-19-2022

PARKHILL SMITH & COOPER INC. F-595
STATE OF TEXAS
KOLE T GLOVER
137904
LICENSED PROFESSIONAL ENGINEER
SURVEYED

Parkhill.com

Business 20 and San Andres Water Main Extension

MIDLAND Feel the Energy!

CLIENT

City of Midland
300 N. Loraine
Midland, Texas 79701-4725
(432) 686-1600

PROJECT NO.
2854.19

#	DATE	DESCRIPTION
4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

Miscellaneous Water Details

C-506

PACKET
6.178
August 9, 2022

TEMPORARY TRAFFIC CONTROL NOTES

1. ALL TEMPORARY TRAFFIC CONTROL SHALL BE IN GENERAL CONFORMANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) (LATEST EDITION AS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION) , EXCEPT AS SPECIFICALLY DIRECTED BY THE CITY ENGINEER OR CITY TRAFFIC ENGINEER.

2. ALL TEMPORARY TRAFFIC CONTROL SHALL BE DESIGNED, INSTALLED, AND MAINTAINED BY COMPETENT AND QUALIFIED PERSONNEL WITH ADEQUATE EXPERIENCE IN TRAFFIC CONTROL.

3. ALL TEMPORARY TRAFFIC CONTROL INVOLVING MULTIPLE LANE CLOSURES OR TRAFFIC SHIFTS, FULL CLOSURES OF COLLECTOR OR ARTERIAL STREETS, TRAFFIC CONTROL EXTENDING THROUGH A RAILROAD CROSSING, OR ANY SETUP REASONABLY DETERMINED BY THE CITY TO BE "COMPLEX", SHALL BE IMPLEMENTED ONLY BY A CONTRACTOR WITH SPECIFIC EXPERIENCE AND EXPERTISE IN THE FIELD OF TRAFFIC CONTROL (I.E., A QUALIFIED "BARRICADE COMPANY").

4. A TRAFFIC CONTROL PLAN (TCP) SHALL BE SUBMITTED TO THE ENGINEERING SERVICES DEPARTMENT, TRAFFIC OPERATIONS DIVISION, AT LEAST TWO BUSINESS DAYS IN ADVANCE OF ANY WORK IN THE RIGHT-OF-WAY THAT IMPACTS TRAFFIC. NO WORK SHALL OCCUR UNTIL AN APPROVED TCP HAS BEEN RETURNED TO THE CONTRACTOR.

5. A COPY OF THE APPROVED TCP SHALL BE KEPT IN THE POSSESSION OF THE PERSON RESPONSIBLE FOR SUPERVISING THE TRAFFIC CONTROL AT ALL TIMES WHILE WORKING IN THE RIGHT-OF-WAY. THE APPROVED TCP SHALL BE PRESENTED TO CITY STAFF OR LAW ENFORCEMENT UPON DEMAND AT ANY TIME.

6. ALL TRAFFIC CONTROL DEVICES SHALL BE MARKED WITH THE CONTRACTOR'S NAME, LOGO, INITIALS, OR OTHER IDENTIFYING INFORMATION SO THAT CITY STAFF CAN DETERMINE OWNERSHIP.

7. DEPENDING ON SITE CONDITIONS AND THE NATURE OF THE WORK, TEMPORARY TRAFFIC CONTROL MAY BE APPROVED BY THE CITY FOR EITHER OF THE FOLLOWING:
   - A. ALL TIMES - ALL TRAFFIC CONTROL, INCLUDING CLOSURES, MAY REMAIN IN PLACE 24 HOURS PER DAY UNTIL EXPIRATION OF THE APPROVED TCP.
   - B. OFF-PEAK ONLY - LANE OR ROAD CLOSURES ARE NOT PERMITTED FROM 6:00-9:00 AM AND 4:00-7:00 PM ON WEEKDAYS (MONDAY THROUGH FRIDAY). OTHER TRAFFIC CONTROL NOT RELATED TO LANE OR ROAD CLOSURES MAY REMAIN IN PLACE 24 HOURS PER DAY UNTIL EXPIRATION OF THE APPROVED TCP.

8. THE CONTRACTOR SETTING THE TEMPORARY TRAFFIC CONTROL SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND UPKEEP OF ALL SIGNS, BARRICADES, AND OTHER DEVICES, AT ALL TIMES.
   - A. ALL TEMPORARY TRAFFIC CONTROL SETUPS SHALL BE MAINTAINED AT LEAST ONE TIME PER DAY, INCLUDING WEEKENDS AND HOLIDAYS.
   - B. MORE FREQUENT MAINTENANCE SHALL BE PERFORMED AS NEEDED, WITH PARTICULAR EMPHASIS TO FOLLOWING UP AFTER SEVERE WEATHER EVENTS OR DURING TIMES OF HIGH WINDS.
   - C. MAINTENANCE SHALL INCLUDE:
     - I. VERIFYING AND CORRECTING THE LOCATION AND ORIENTATION OF ALL SIGNS, BARRICADES, AND OTHER DEVICES;
     - II. KEEPING SIGNS AND REFLECTIVE AREAS OF BARRICADES AND OTHER DEVICES CLEAN AND FREE OF DIRT BUILDUP SO AS TO MAINTAIN APPROPRIATE VISIBILITY AND LEGIBILITY; AND
     - III. ENSURING THE PROPER LOCATION, ORIENTATION, AND OPERATION OF ARROW BOARDS OR MESSAGE BOARDS, IF PRESENT.

9. ARROW BOARDS SHALL BE REQUIRED FOR LANE CLOSURES UNDER THE FOLLOWING CONDITIONS:
   - A. ON ROADWAYS WITH A POSTED SPEED LIMIT OF 55 MPH OR GREATER, FOR CLOSURES LASTING MORE THAN ONE (1) HOUR;
   - B. ON ROADWAYS WITH A POSTED SPEED LIMIT OF 45 MPH OR GREATER, FOR CLOSURES LASTING MORE THAN FOUR (4) HOURS;
   - C. ON ANY ROADWAY IF LANES WILL REMAIN OPEN TO TRAFFIC TRAVELLING IN THE SAME DIRECTION ON BOTH SIDES OF A CLOSED LANE DURING ANY OVERNIGHT HOURS (FROM 7:00 PM TO 6:00 AM); AND
   - D. AT OTHER TIMES AS SHOWN ON THE APPROVED TCP, OR AS OTHERWISE DIRECTED BY THE CITY.

Parkhill

07-19-2022

PARKHILL SMITH & COOPER INC. T-526
STATE OF TEXAS
KOLE T. GLOVER
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LICENSED PROFESSIONAL ENGINEER

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Business 20 and San Andres Water Main Extension

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City of Midland
300 N. Loraine
Midland, Texas 79701-4725
(432) 686-1600

PROJECT NO.
2854.19

#	DATE	DESCRIPTION
4	7-19-2022	Bid Set
3	1-9-2020	90% Review
2	11-24-2019	60% Review
1	10-27-2019	30% Review

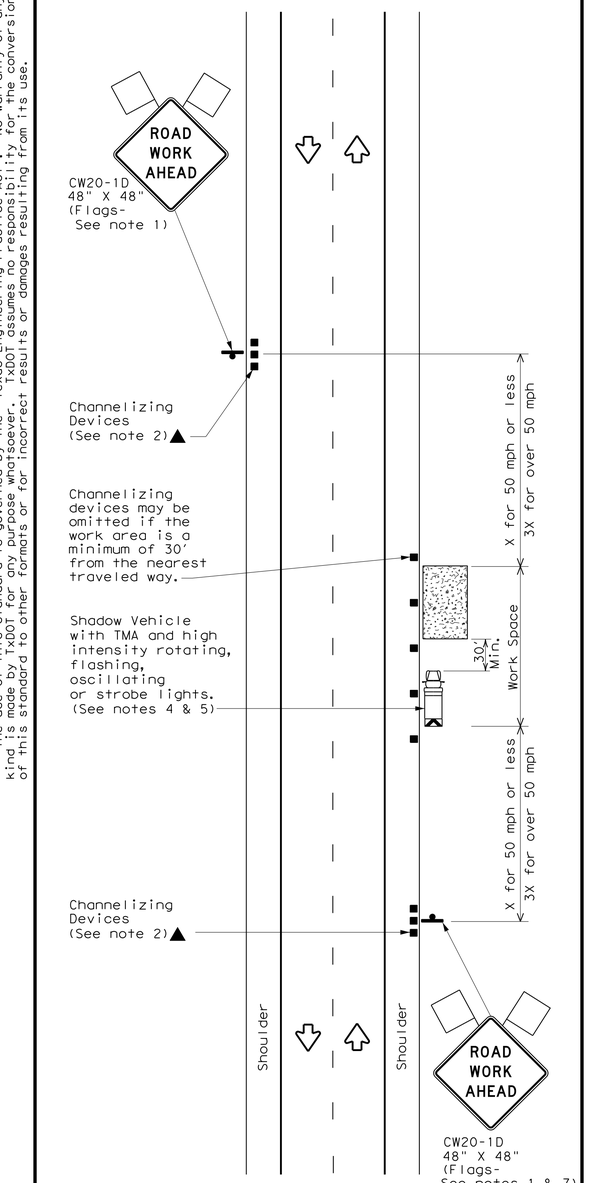
Traffic Control General Notes

TC-100

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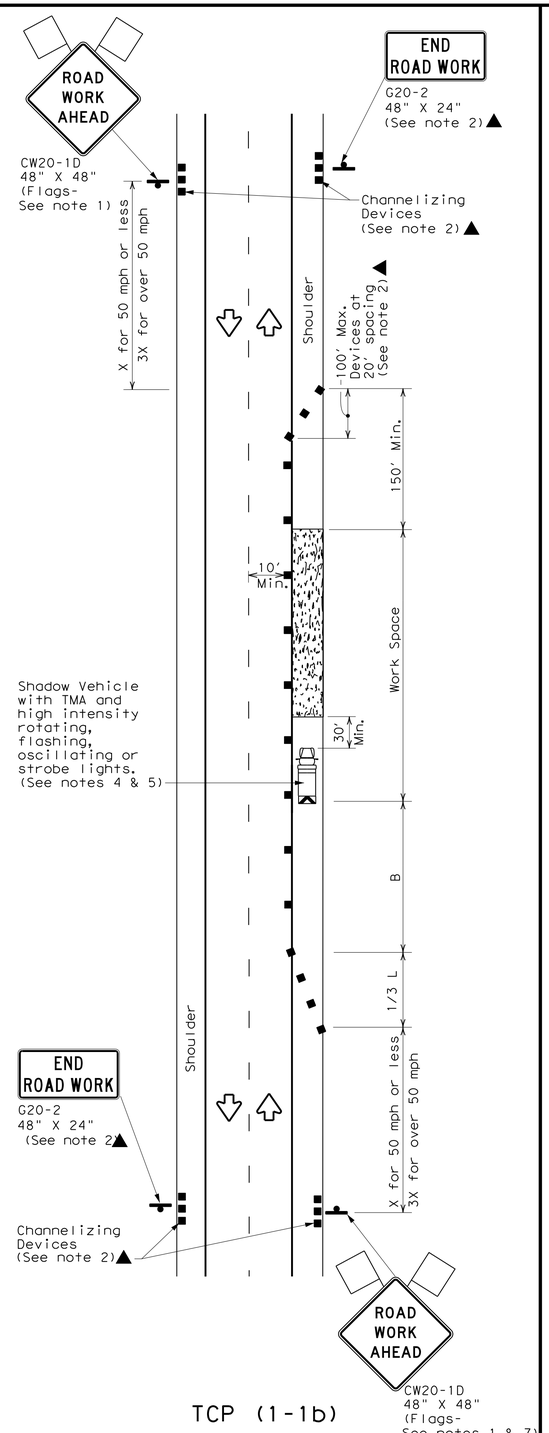
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DATE:
FILE:



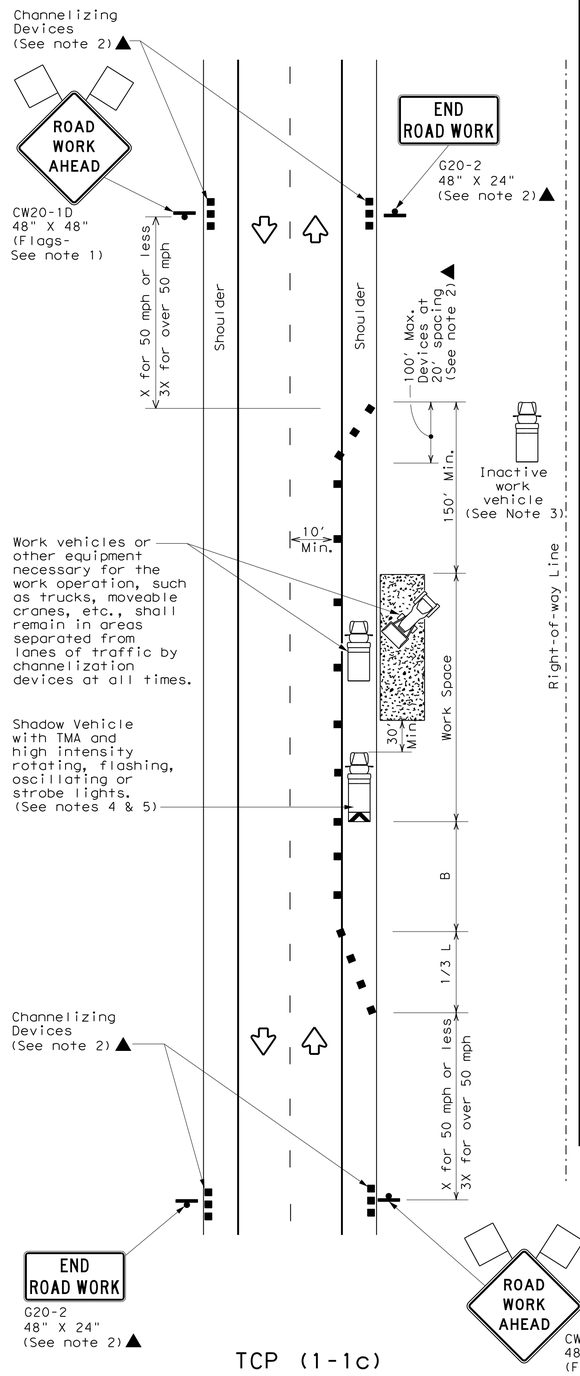
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1)for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

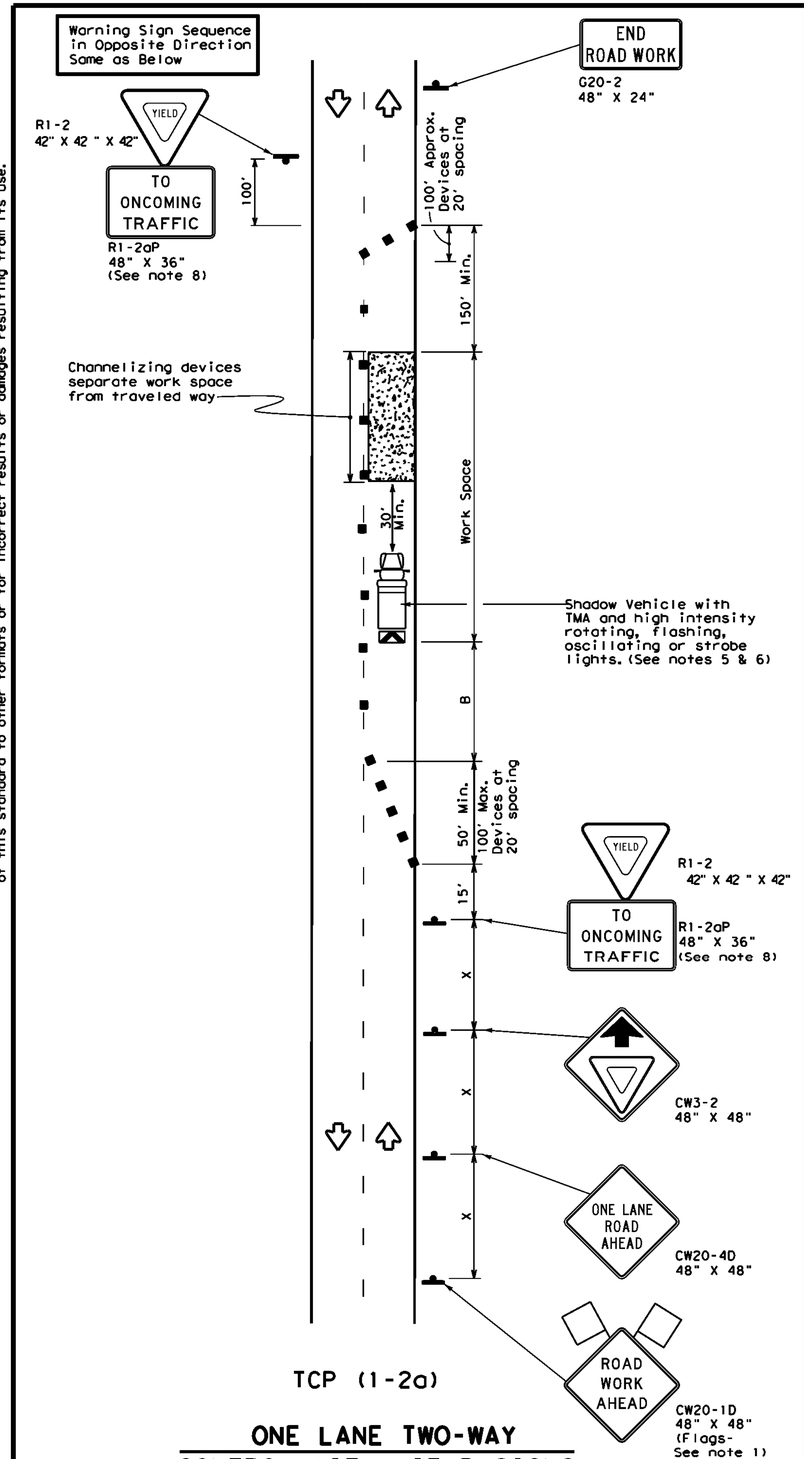
TCP(1-1)-18

FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-94 4-98 8-95 2-12 1-97 2-18	DIST	COUNTY		SHEET NO.

151

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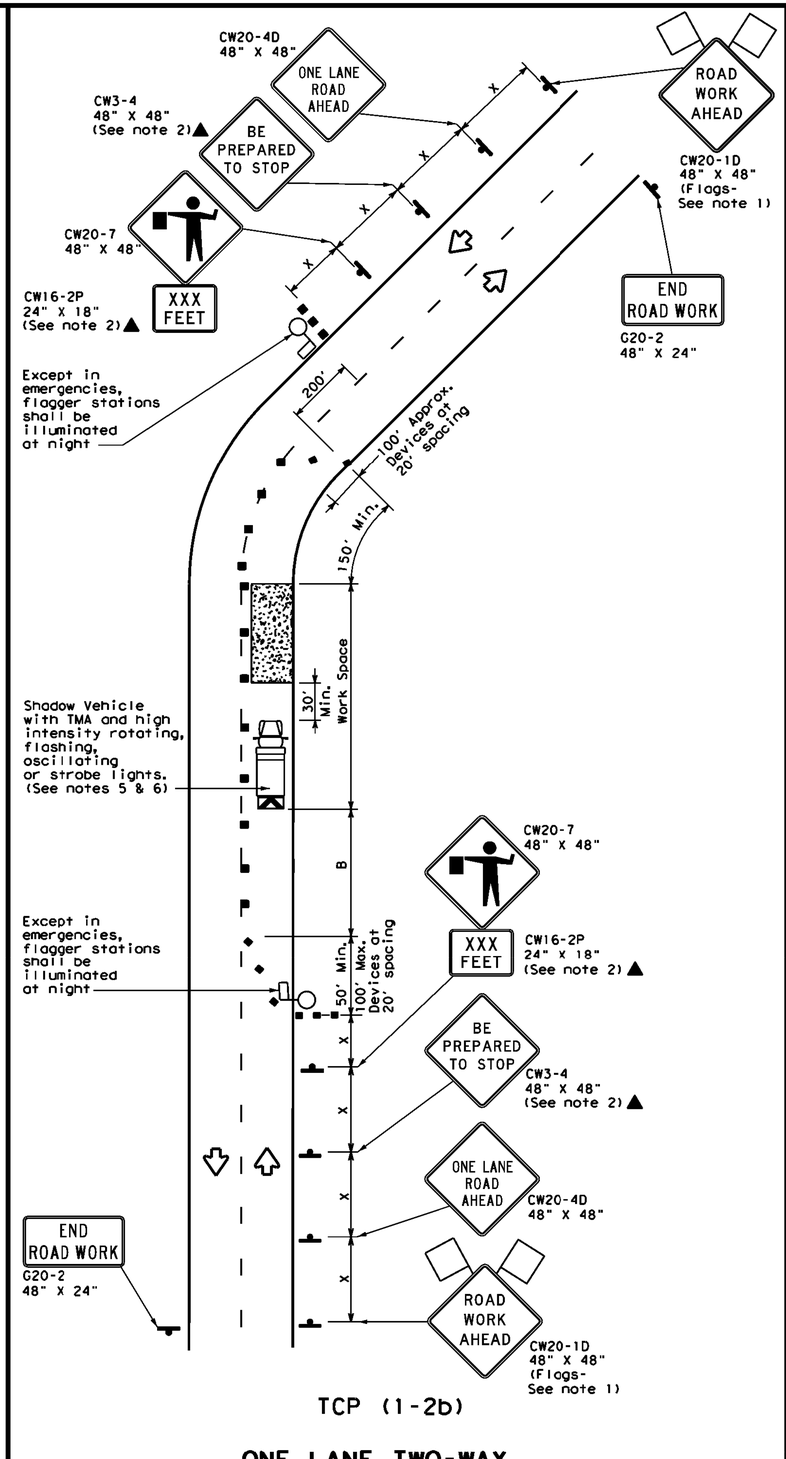
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TCP (1-2a)

ONE LANE TWO-WAY CONTROL WITH YIELD SIGNS

(Less than 2000 ADT - See note 7)



TCP (1-2b)

ONE LANE TWO-WAY CONTROL WITH FLAGGERS

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L=WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
4. Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
5. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
6. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-2a)

7. R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
8. R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

TCP (1-2b)

9. Flaggers should use two-way radios or other methods of communication to control traffic.
10. Length of work space should be based on the ability of flaggers to communicate.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
12. Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
13. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

Texas Department of Transportation

Traffic Operations Division Standard

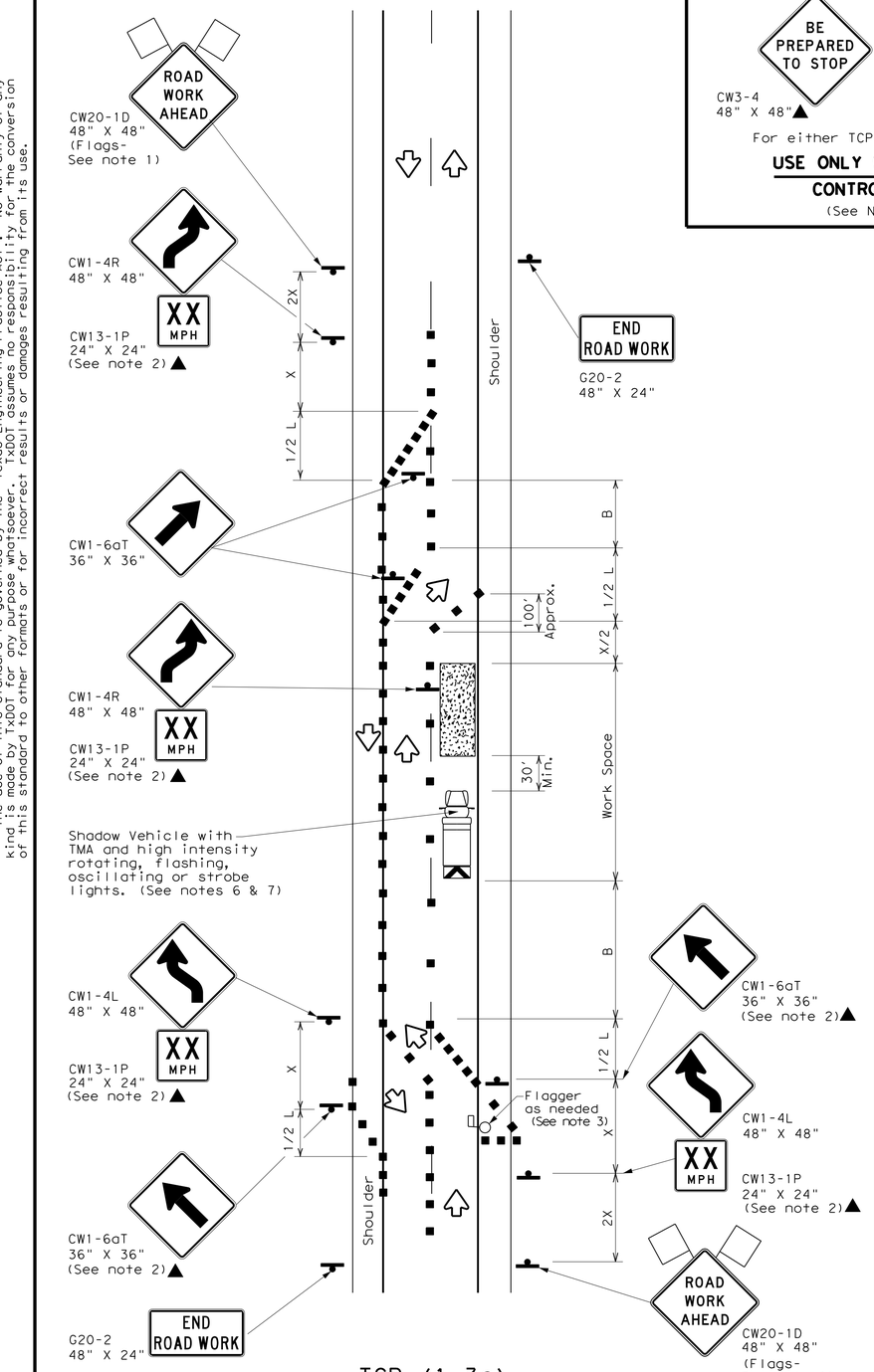
TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP(1-2)-18

FILE: tcp1-2-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-90 4-98 2-94 2-12 1-97 2-18	DIST	COUNTY		SHEET NO.

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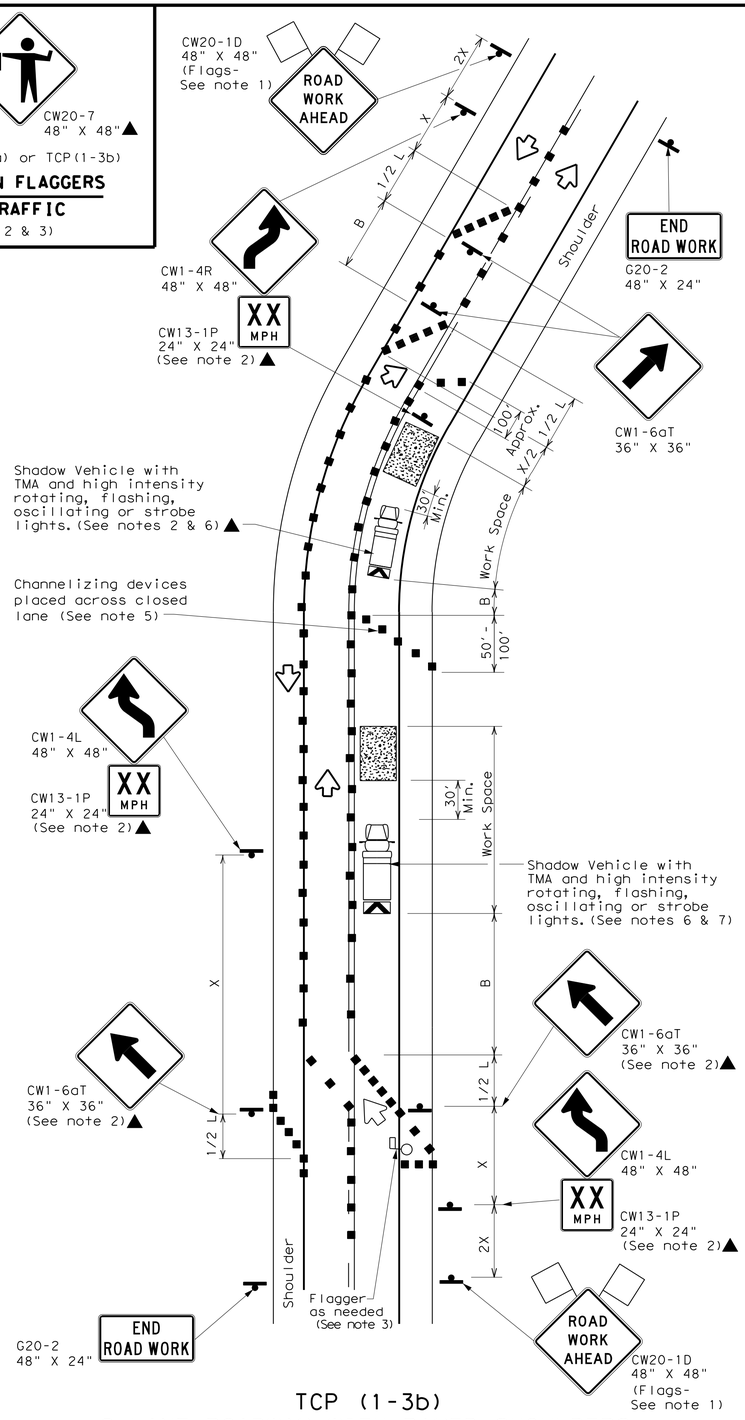
TCP (1-3a)
2-LANE ROADWAY WITH PAVED SHOULDERS

ONE LANE CLOSED
ADEQUATE FIELD OF VIEW

BE PREPARED TO STOP
CW3-4 48" X 48"
CW20-7 48" X 48"

For either TCP(1-3a) or TCP(1-3b)

USE ONLY WHEN FLAGGERS CONTROL TRAFFIC
(See Notes 2 & 3)



TCP (1-3b)
2-LANE ROADWAY WITH PAVED SHOULDERS

ONE LANE CLOSED
INADEQUATE FIELD OF VIEW

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Flagger control should NOT be used unless roadway conditions or heavy traffic volume require additional emphasis to safely control traffic. Additional flaggers may be positioned in advance of traffic queues to alert traffic to reduce speed.
4. DO NOT PASS, PASS WITH CARE and construction regulatory speed zone signs may be installed downstream of the ROAD WORK AHEAD signs.
5. When the work zone is made up of several work spaces, channelizing devices should be placed laterally across the closed lane to re-emphasize closure. Laterally placed channelizing devices should be repeated every 500 to 1000 feet in urban areas and every 1/4 to 1/2 mile in rural areas.
6. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
7. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
8. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20', or 15' if posted speed are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the area of conflicting markings not the entire work zone.

Texas Department of Transportation

Traffic Operations Division Standard

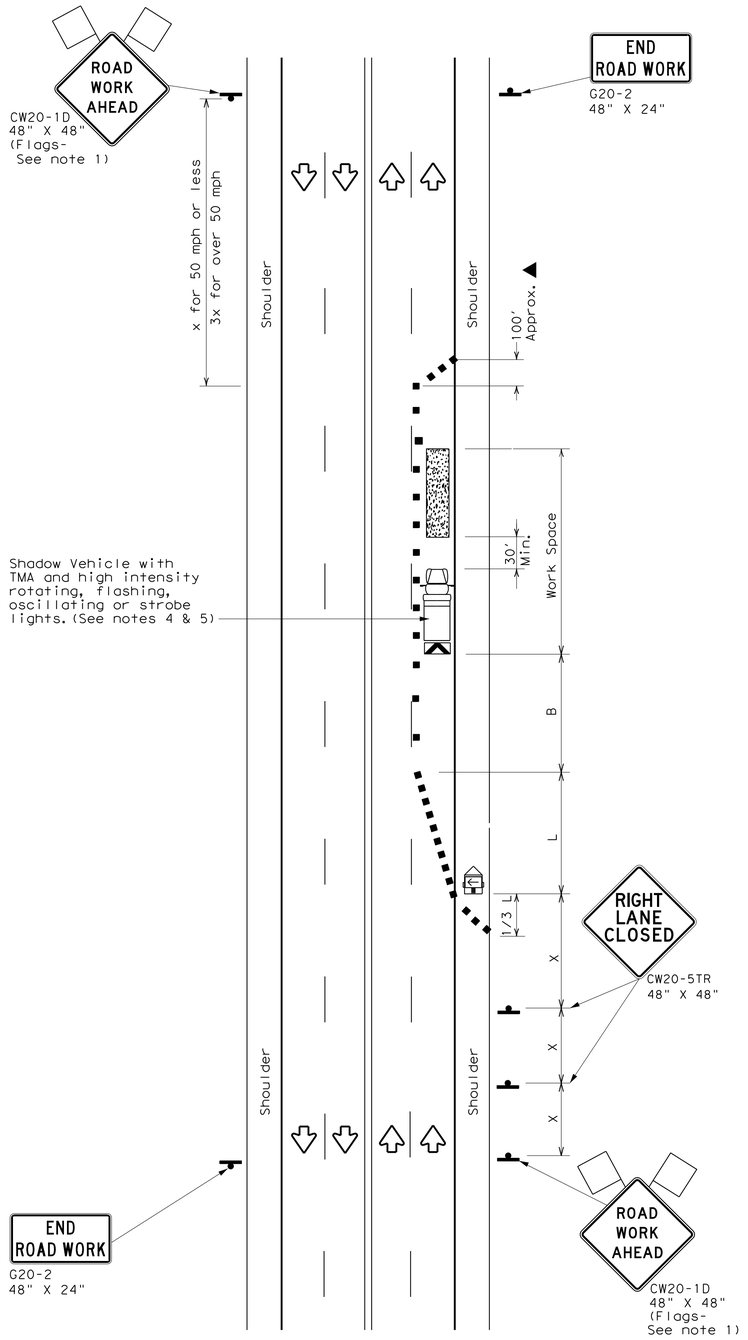
TRAFFIC CONTROL PLAN TRAFFIC SHIFTS ON TWO LANE ROADS

TCP(1-3)-18

FILE: tcp1-3-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-94 4-98 8-95 2-12 1-97 2-18	DIST	COUNTY		SHEET NO.

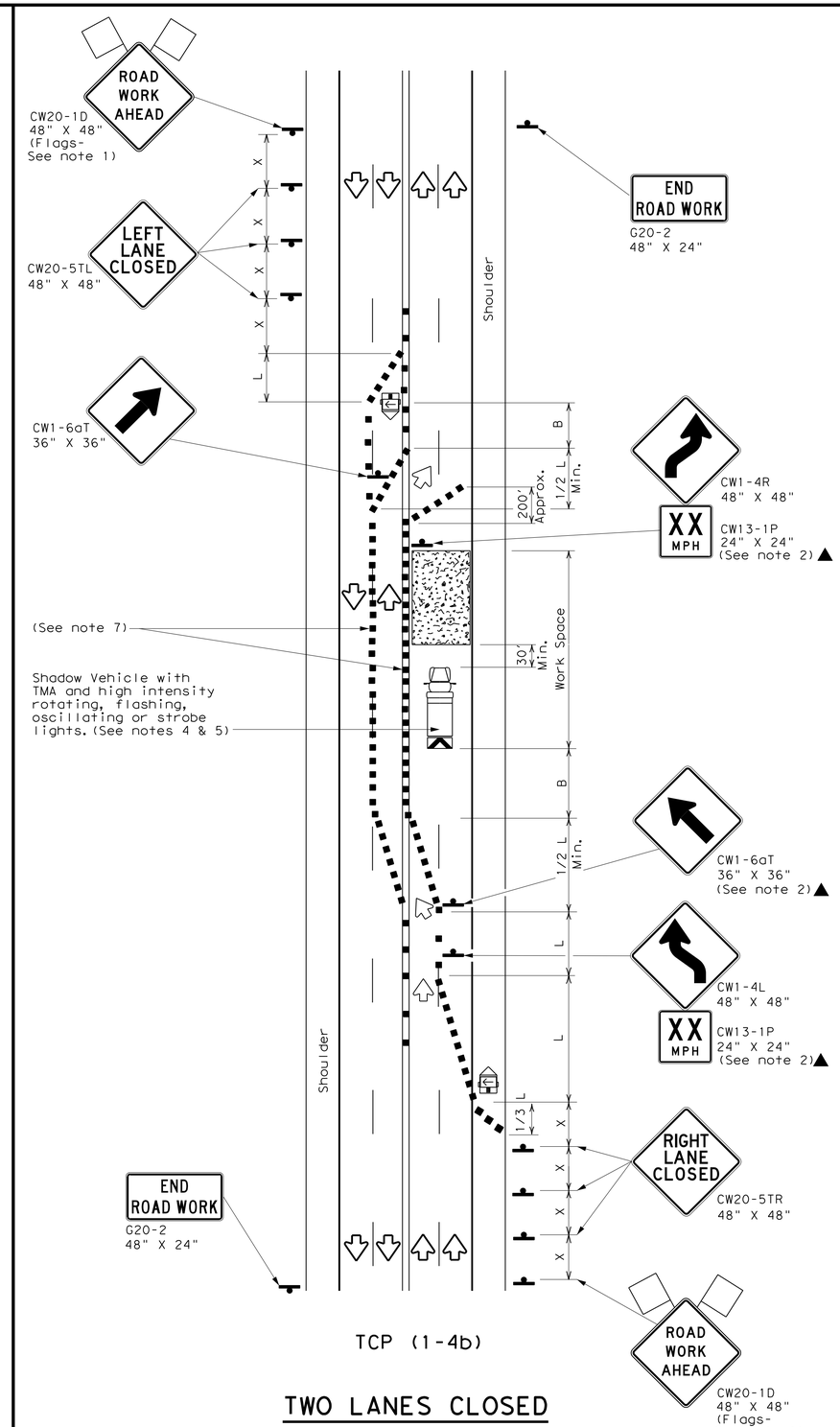
153

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TCP (1-4a)

ONE LANE CLOSED



TCP (1-4b)

TWO LANES CLOSED

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L = WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-4a)

6. If this TCP is used for a left lane closure , CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.

TCP (1-4b)

7. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(1-4)-18

FILE: tcp1-4-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-94 4-98 8-95 2-12 1-97 2-18	DIST	COUNTY		SHEET NO.
				154

DATE:
FILE:

City Council Meeting

Item Number: 7

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Erika Martinez, Manager, Purchasing

Subject: RESOLUTION RATIFYING AND APPROVING THE PAYMENT FOR THE EMERGENCY MANHOLE REMOVAL AND REPLACEMENT IN JAL DRAW AT WHITNEY DRIVE BY TEC EXCAVATION, INC., FOR A TOTAL COST OF $103,805.00 (DISTRICT 3) (GENERAL SERVICES)

Purpose:

Resolution ratifying and approving the emergency sewer manhole removal and replacement in Jal Draw at Whitney Drive performed by TEC Excavation, Inc. for a total cost of $103,805.00.

Recommended City Council Action:

Approve

Fiscal Impact:

Funds are available in the FY22 Water & Sewer Fund Operating Budget and will be transferred and appropriated to a project for said purposes.

Discussion:

TEC Excavation was called to remove and replace sewer manholes in Jal Draw at Whitney Drive. Please see the attached memo from Carl Craigo, Utilities Director, for additional information.

Therefore, please consider a resolution ratifying and approving the emergency sewer manhole removal and replacement in Jal Draw at Whitney Drive by TEC Excavation, Inc. of Midland, Texas for a total cost of $103,805.00.

Tina Dawg

City Manager's Office

INTEROFFICE MEMORANDUM

TO: Erika Martinez, Purchasing Manager

FROM: Carl Craigo, PE, Utilities Director

SUBJECT: Consider a Resolution Ratifying the Emergency sewer main manhole repairs performed by TEC Excavation Inc.

DATE: August 9, 2022

A collapsed sewer manhole was discovered in Jal Draw North of Wadley at the beginning of June. This sewer main is a system that flows ¾ full at all times and is approximately 12' deep. Utilities crews were unable to perform the removal and replacement of the manhole so TEC Excavation Inc. was called in for the replacement. The project consisted of placing two new manholes that would allow the collapsed manhole to be bypassed and a new sewer main installed.

TEC Excavation Inc. provided their services on the reroute of the wastewater main. The cost for TEC Excavation Inc. to perform the repairs was $103,805.00. Utilities has paid for the material to get the project completed and request Council to ratify the construction costs of $103,805.00. The repair cost will be paid out of the Utilities' maintenance of sanitary sewer line item (300335 54110), and will be transferred and appropriated to a project for said purposes.

RESOLUTION NO. _____

RESOLUTION RATIFYING AND APPROVING THE PAYMENT FOR THE EMERGENCY MANHOLE REMOVAL AND REPLACEMENT IN JAL DRAW AT WHITNEY DRIVE BY TEC EXCAVATION, INC., FOR A TOTAL COST OF $103,805.00

WHEREAS, a collapsed sewer manhole was discovered in Jal Draw north of Wadley; and

WHEREAS, TEC Excavation, Inc., was the emergency utility contractor called on to remove the collapsed manhole and to place two new manholes that would allow the collapsed manhole to be bypassed and a new sewer main to be installed; and

WHEREAS, TEC Excavation, Inc., agreed to provide the emergency services for a total cost of $103,805.00 as shown on the invoice attached hereto as Exhibit "A" and incorporated herein for all purposes; and

WHEREAS, the City Council finds and determines that said unforeseen damage to said manhole constitutes unforeseen damage to public machinery, equipment, or other property as contemplated by TEX. LOC. GOV'T CODE § 252.022(a)(3); and

WHEREAS, the City Council finds it to be in the public interest to ratify and approve the payment for emergency services provided by TEC Excavation, Inc., for a total cost of $103,805.00;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the payment for emergency services by TEC Excavation, Inc., at a total cost of $103,805.00, is hereby ratified and approved.

SECTION TWO. That funds are available in the FY22 Water & Sewer Fund operating budget and will be transferred an appropriated to a project for said purpose.

SECTION THREE. That the City Comptroller is hereby authorized and directed to pay TEC Excavation, Inc., an amount not to exceed $103,805 from funds available in a project for said purpose upon proper receipt of invoices or statements approved by the

Interim City Manager.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Carl Craigo, Utilities Director

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller City Attorney

P.O. BOX 80455
MIDLAND, TX 78708

TEC EXCAVATION MIDLAND, TX INC. (432) 687-5346

432-682-2619 PH.
432-684-1151 FAX

INVOICE

Bill To:
CITY OF MIDLAND
300 N. LORAINE
MIDLAND, TX 79701

Job Address:
REMOVE & REPLACE MANHOLES IN JAL DRAW AT WHITNEY DR.
MIDLAND, TX

Date	P.O. #	Job No.	Invoice No.	Ship Via	Terms	Tax ID
7/14/2022	CARL CRAIGO	20-109	71422		DUE UPON RECEIPT	52-2374490

Quantity	Unit	Description	Unit Price	Total
1	LS	REMOVE & REPLACE MANHOLES	$103,805.00	$ 103,805.00

Subtotal	
Tax	$ 103,805.00
Shipping	$ -
Misc.	$ -
Bal. Due	$ 103,805.00

Please make checks payable to:
TEC Excavation
P.O. Box 80455
Midland, TX 79708

City of Midland
Office Memorandum

DATE: August 9, 2022

TO: The Honorable Mayor and City Council Members

FROM: Amy Turner, City Secretary

SUBJECT: **RESOLUTION CALLING AN ELECTION FOR THREE CITY OFFICIALS; AMENDING THE BOUNDARY OF THE CITY ELECTION AND CITY COUNCIL DISTRICTS; PROVIDING FOR USE OF ACCESSIBLE VOTING SYSTEMS; ESTABLISHING ELECTION PRECINCTS FOR SAID ELECTION; AND ESTABLISHING VOTE CENTERS FOR SAID ELECTION**

The proposed resolution calls the election to be held November 8, 2022 for the Mayor and for City Council Members representing Districts 3 and 4. It also designates the vote centers and early voting dates and locations.

The City's share of the cost of this joint election in Midland County is estimated at $20,000 and is handled through the master inter-local agreement with Midland County. The City's share of the cost of the joint election with Martin County is approximately $5,000.

RESOLUTION NO. _____

RESOLUTION CALLING AN ELECTION FOR THREE CITY OFFICIALS; AMENDING THE BOUNDARY OF THE CITY ELECTION AND CITY COUNCIL DISTRICTS; PROVIDING FOR USE OF ACCESSIBLE VOTING SYSTEMS; ESTABLISHING ELECTION PRECINCTS FOR SAID ELECTION; AND ESTABLISHING VOTE CENTERS FOR SAID ELECTION

WHEREAS, the laws of the State of Texas provide that an election of City officials may be held on the first Tuesday after the first Monday in November during 2022; and

WHEREAS, it is necessary for the City Council to order that an election be held on Tuesday, November 8, 2022, and to establish election precincts and vote centers for the current election year beginning April 1, 2022;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That an election be, and is, hereby ordered to be held on Tuesday, November 8, 2022, during the hours of 7:00 a.m. to 7:00 p.m. for the offices of the Mayor and City Council Members representing Districts 3 and 4.

SECTION TWO. That due to recent annexations by the City of Midland, the limits or boundaries of Single Member Districts 2 and 4 and of the City as a whole, along with the boundaries of City Election Precinct Nos. 4, 14, and 17 are hereby amended to add the additional property shown on Exhibit A, which is attached hereto and incorporated herein for all purposes.

SECTION THREE. That the City hereby adopts for use in early and election day voting the ExpressVote Electronic Voting System in Midland County and the Varity Electronic Voting System in Martin County, as approved by the Secretary of State. Optical scan ballots shall be used for early voting by mail and provisional ballots, and the electronic voting systems shall be used for early voting by personal appearance and in each vote center in the City on election day.

SECTION FOUR. That in accordance with the provisions of Texas Election Code § 42.061, the Municipal Election precincts for the voting year effective April 1, 2022, through March 31, 2023, are hereby designated as follows:

City Election Precinct No. 1, containing County Voting Precinct No. 211;

City Election Precinct No. 2, containing County Voting Precinct Nos. 308 and 310;

City Election Precinct No. 3, containing County Voting Precinct No. 306;

City Election Precinct No. 4, containing County Voting Precinct No. 305 and a portion of County Voting Precinct No. 201;

City Election Precinct No. 5, containing County Voting Precinct No. 304;

City Election Precinct No. 6, containing County Voting Precinct Nos. 309 and 101A;

City Election Precinct No. 7, containing County Voting Precinct Nos. 307;

City Election Precinct No. 8, containing County Voting Precinct No. 205;

City Election Precinct No. 9, containing County Voting Precinct No. 307A;

City Election Precinct No. 10, containing County Voting Precinct Nos. 104, 109 and 303;

City Election Precinct No. 11, containing County Voting Precinct No. 208;

City Election Precinct No. 12, containing County Voting Precinct No. 105;

City Election Precinct No. 13, containing County Voting Precinct No. 106;

City Election Precinct No. 14, containing County Voting Precinct No. 102;

City Election Precinct No. 15, containing County Voting Precinct No. 103;

City Election Precinct No. 16, containing County Voting Precinct No. 405;

City Election Precinct No. 17, containing County Voting Precinct Nos. 107 and 110;

City Election Precinct No. 18, containing County Voting Precinct No. 407;

City Election Precinct No. 19, containing County Voting Precinct No. 404;

City Election Precinct No. 20, containing County Voting Precinct No. 403;

City Election Precinct No. 21, containing County Voting Precinct No. 206;

City Election Precinct No. 22, containing County Voting Precinct No. 207;

City Election Precinct No. 23, containing County Voting Precinct No. 210;

City Election Precinct No. 24, containing County Voting Precinct No. 204;

City Election Precinct No. 25, containing County Voting Precinct Nos. 408 and 409;

City Election Precinct No. 26, containing County Voting Precinct No. 411;

City Election Precinct No. 27, containing County Voting Precinct No. 402;

City Election Precinct No. 28, containing Martin County Voting Precinct No. 1 described below:

Beginning at a point in the west R.O.W. line of State Highway 349, said point lying 72 feet west of the east section line of Section 11, Block 39, T-1-S, T&P Ry. Co. Survey, more or less;

Thence northwesterly approximately 5,097 feet along the west R.O.W. line of State Highway 349 to a point for a corner, said point lying in the west R.O.W. of State Highway 349 and on the Martin County-Midland County line;

Thence east along the Martin-Midland County Line approximately 17,250 feet to a point for a corner, said point being 660 feet east of the west section line and 491 feet north of the south section line of Section 9, Block 38, T-1-S, T&P Ry. Co. Survey;

Thence southeasterly approximately 1,151 feet along a line lying 660 feet east of and parallel to the west section lines of Sections 9 and 16, Block 38, T-1-S, T&P Ry. Co. Survey, to a point for a corner; said point being 660 feet east of the west line and 660 feet south of the north line of Section 16, Block 38, T-1-S, T&P Ry. Co. Survey;

Thence southwesterly approximately 5,280 feet along a line lying 660 feet south of and parallel to the north line of Sections 16 and 17, Block 38, T-1-S, T&P Ry. Co. Survey; to a point for a corner; said point being 660 feet east of the west line and 660 feet south of the north line of said Section 17, Block 38, T-1-S, T&P Ry. Co. Survey;

Thence northwesterly 1,320 feet along a line lying 660 feet more or less east of and parallel to the western line of Sections 17 and 8, Block 38, T-1-S, T&P Ry. Co. Survey, to a point for a corner; said point being 660 feet east of the west line and 660 feet north of the south line of Section 8, Block 38, T-1-S, T&P Ry. Co. Survey;

Thence westerly approximately 11,292 feet along a line lying 660 feet, more or less, north of and parallel to the northern line of Section 18, Block 38, T-1-S, T&P Ry. Co. Survey and Sections 11 and 12, Block "X", H. P. Hilliard Survey to the point of beginning:

And a tract of land lying in Martin County described as follows:

Beginning at a point on the City limits line of the City of Midland, said point

lying at the intersection of the west R.O.W. line of State Highway 349 and the Midland-Martin County line and located approximately 73 feet west of the east section line and 183 feet south of the north section line of Section 11, Block 39, T-1-S, T&P Ry. Co. Survey;

Thence northwesterly along the west R.O.W. line of State Highway 349 approximately 11,403 feet to a point for a corner, said point being 660 feet north of the south section line and 170.5 feet west of the east section line of Section 26, Block 39, T-1-N, T&P Ry. Co. Survey, said point lying on the west R.O.W. line of State Highway 349;

Thence northeasterly 660 feet north of and parallel to the south section lines of Sections 26 and 25, Block 39, T-1-N, T&P Ry. Co. Survey and Sections 32, 31 and 30, Block 38, T-1-N, T&P Ry. Co. Survey to a point for a corner; said point being 660 feet north of the south line and 660 feet east of the west line of said Section 30, Block 38, T-1-N, T&P Ry. Co. Survey;

Thence southeasterly a distance of approximately 15,909 feet along a line lying 660 feet east of and parallel to the west section lines of Sections 30 and 35, Block 38, T-1-N, T&P Ry. Co. Survey, and Sections 4 and 9, Block 38, T-1-S, T&P Ry. Co. Survey, to a point for a corner; said point being 660 feet east of the west line of said Section 9, and lying on the Midland-Martin County line:

Thence west along the Midland-Martin County line a distance of approximately 17,250 feet to the point of beginning;

City Election Precinct No. 29, containing County Voting Precinct No. 410 and a portion of County Voting Precinct No. 401.

SECTION FIVE. That in accordance with the provisions of Texas Election Code §§ 43.004, 271.002 and 271.003, the Municipal vote centers for the election to be held on Tuesday, November 8, 2022, are hereby designated as follows:

MIDLAND COUNTY

Annex Building Auxiliary Courtroom located at 2110 North A St.
Centennial Library, Meeting Room 113 located at 2503 W. Loop 250 N.
Cogdell Learning Center, Classroom #4 located at 201 W. Florida Ave.
Cotton Flat Baptist Church located at 6409 S. Highway 349
Downtown Library at the Plaza, Community Room located at 301 S. Missouri Ave.
Fairmont Park Church of Christ, Classroom 2 located at 3813 N. Midland Dr.
Fellowship Community Church, Sanctuary located at 5206 N. Midland Dr.
Golf Course Church of Christ, Rooms 301 and 302 located at 3500 W. Golf Course Rd.
Greater Ideal Life Center, Samuel Evan Chapel located at 301 S. Tyler St.
Greenwood Baptist Church, Sanctuary located at 10909 FM 307
Holy Cross Lutheran Church located at 5110 N. Garfield St.
Horseshoe Arena located at 2514 Arena Trail
Mid-Cities Community Church located at 8700 State Highway 191
Midland Chin Baptist Church located at 2800 W. Louisiana Ave.
MLK, Jr. Community Center, Activity Room located at 2300 Butternut Ln.

Odessa Country Club, Pool House located at #1 Fairway Dr.
Presence Church, Sanctuary located at 901 N. Midland Dr.
St. Paul Methodist Church, Abundant Life Room located at 4501 Thomason Dr.
Stonegate Fellowship, Foyer of Building C located at 6000 W. Wadley Ave.
The Orchard Church, Sanctuary located at 6112 N. Big Spring St.

MARTIN COUNTY

Martin County Community Center located at 301 N. Theresa St., Stanton, Texas

SECTION SIX. That the method of voting shall be by paper ballots that are counted by a centralized optical scanner or by use of the electronic voting systems, as set out herein. Voting shall be conducted between the hours of 7:00 a.m. and 7:00 p.m. on the date of such election; and election shall be held in accordance with the constitutional laws of the State of Texas and all qualified electors of the City of Midland, Texas, shall be entitled to vote.

SECTION SEVEN. That early voting in Midland County shall be conducted at the Midland County Election Administrator's Office, in the County Annex, 2110 North A Street, Midland, Texas in accordance with the provisions of Texas Election Code § 85.002. Early voting shall be by electronic voting system, and shall be conducted during the regular office hours of 8:00 a.m. to 5:00 p.m. on October 24, 2022, through October 28, 2022; from 7:00 a.m. to 7:00 p.m on October 29, 2022, from 1:00 p.m. to 7:00 p.m. on October 30, 2022; and from 7:00 a.m. to 7:00 p.m on October 31, 2022, through November 4, 2022. Applications for ballots by mail shall be addressed to Early Voting Clerk, P.O. Box 3434, Midland, Texas 79702. Contact information for the Midland County Elections Office is as follows: 432-688-4890, cgraves@mcounty.com, www.co.midland.tx/us/328/Elections-Office.

SECTION EIGHT. That early voting in Martin County shall be conducted at the Martin County Election/Voter Registrar Office, 110 W. School, Stanton, Texas 79782 in accordance with the provisions of Texas Election Code § 85.002. Early voting shall be by electronic voting system, and shall be conducted during the regular office hours of 8:00 a.m. to 5:00 p.m. on October 24, 2022, through October 28, 2022; and from 8:00 a.m. to 5:00 p.m. on October 31, 2022, through November 4, 2022. Applications for ballots by mail shall be

addressed to Helen Floyd, Martin County Election Administrator, P.O. Box 1009, Stanton, Texas 79782. Contact information for the Martin County Elections Office is as follows: 432-607-3580, hfloyd@co.martin.tx.us, helen.floyd4591@yahoo.com, www.martincountytx.com/158/Elections-Administration-Office.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT AND COMPLETENESS:

_____
Amy M. Turner, City Secretary

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

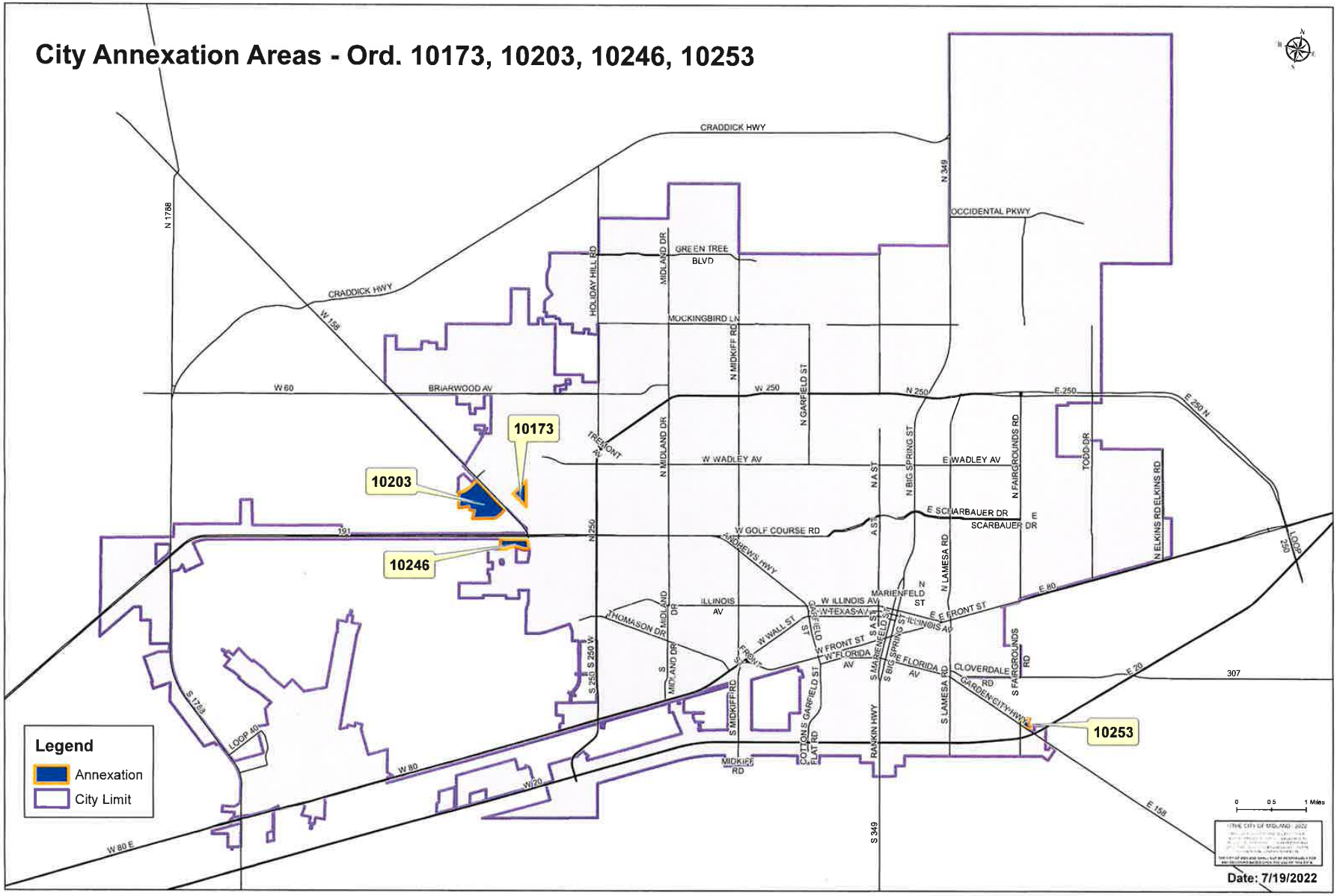

City Annexation Areas - Ord. 10173, 10203, 10246, 10253
10173
10203
10246
10253
Legend
Annexation
City Limit
CRADDICK HWY
OCCIDENTAL PKWY
GREEN TREE BLVD
MOCKINGBIRD LN
BRIARWOOD AV
W WADLEY AV
E WADLEY AV
W GOLF COURSE RD
E SCHARBAUER DR
SCARBAUER DR
ANDREWS HWY
ILLINOIS AV
W ILLINOIS AV
E ILLINOIS AV
W TEXAS AV
E FRONT ST
W FRONT ST
W FLORIDA AV
E FLORIDA AV
MARIENFELD ST
W WALL ST
THOMASON DR
CLOVERDALE RD
GARDEN CITY HWY
MIDKIFF RD
COTTON FLAT RD
RANKIN HWY
HOLIDAY HILL RD
MIDLAND DR
N MIDKIFF RD
N GARFIELD ST
N BIG SPRING ST
N FAIRGROUNDS RD
TODD DR
N ELKINS RD
N LAMESA RD
S LAMESA RD
S FAIRGROUNDS RD
TREMONT AV
N A ST
S A ST
LOOP 250
LOOP 40
E 250 N
E 20
307
E 158
W 80 E
W 20
Date: 7/19/2022

EXHIBIT A

City Council Meeting

Item Number: 9

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Whitney Craig, Manager, Health and Senior Services

Subject: **Motion authorizing the acceptance of grant funds from the Texas Department of State Health Services in the following amounts and for the following purposes: $150,358.00 to assist the City of Midland Health Services Division (the "City") with the delivery of immunization services; $105,462.00 to assist the City with the funding and delivery of public health emergency preparedness services; authorizing the City Manager or his designee to execute all necessary acceptance documents; and authorizing and directing the City Treasurer to deposit said grant funds into the General Fund. (DISTRICT: ALL) (COMMUNITY SERVICES)**

Purpose:

Motion authorizing the acceptance of grant funds from the Texas Department of State Health Services in the following amounts and for the following purposes: $150,358.00 to assist the City of Midland Health Services Division (the "City") with the delivery of immunization services; $105,462.00 to assist the City with the funding and delivery of public health emergency preparedness services; authorizing the City Manager or his designee to execute all necessary acceptance documents; and authorizing and directing the City Treasurer to deposit said grant funds into the General Fund.

Recommended City Council Action:

Approve

Fiscal Impact:

$255,820.00 in reimbursement funds from the Texas Department of State Health Services.

Discussion:

The Midland Health Department is seeking approval for the acceptance of two grants. These funds are instrumental in allowing the City to provide services to the community. The

Immunization grant and the Public Health Emergency Preparedness grant are accepted annually.



City Manager's Office

City Council Agenda

Approved for Agenda:

City Manager's Office

MEETING DATE: August 9, 2022

TO: City Council / City Manager

FROM: Cristina Odenborg Burns / Community Services Director

SUBJECT: Motion authorizing the acceptance of grant funds from the Texas Department of State Health Services in the following amounts and for the following purposes: $150,358.00 to assist the City of Midland Health Services Division (the "City") with the delivery of immunization services; $105,462.00 to assist the City with the funding and delivery of public health emergency preparedness services; authorizing the City Manager or his designee to execute all necessary acceptance documents; and authorizing and directing the City Treasurer to deposit said grant funds into the General Fund.

Purpose:

Motion authorizing the acceptance of grant funds from the Texas Department of State Health Services in the following amounts and for the following purposes: $150,358.00 to assist the City of Midland Health Services Division (the "City") with the delivery of immunization services; $105,462.00 to assist the City with the funding and delivery of public health emergency preparedness services; authorizing the City Manager or his designee to execute all necessary acceptance documents; and authorizing and directing the City Treasurer to deposit said grant funds into the General Fund.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Directional / Informational

Fiscal Impact:

$255,820.00 in reimbursement funds from the Texas Department of State Health Services.

Discussion:

The Midland Health Department is seeking approval for the acceptance of two grants. These funds are instrumental in allowing the City to provide services to the community. The Immunization grant and the Public Health Emergency Preparedness grant are accepted annually.

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DEPARTMENT OF STATE HEALTH SERVICES
CONTRACT NO. HHS000102800001
AMENDMENT NO. 4

The **DEPARTMENT OF STATE HEALTH SERVICES** (DSHS or System Agency) and Midland Health and Senior Services (Grantee), Parties to that certain Immunization/Locals Grant Program Contract, effective September 1, 2018, and denominated DSHS Contract No. HHS000102800001 (the Contract), as amended, now want to further amend the Contract.

WHEREAS, DSHS wants to exercise its option to extend the Contract term for an additional year, representing the fourth and final extension option ("Fourth and Final Extension Option");

WHEREAS, DSHS wants to add funds to the Contract to pay for services provided during the extended term;

WHEREAS, DSHS wants to revise **ATTACHMENT A, STATEMENT OF WORK** and **ATTACHMENT H-2, IMMUNIZATION/LOCALS PROGRAM GUIDANCE DOCUMENT**.

NOW, THEREFORE, the Parties agree as follows:

1. The Contract is extended in accordance with **SECTION III**, **DURATION,** for an additional year. The Fourth and Final Extension Option shall begin September 1, 2022 and end August 31, 2023, unless terminated sooner.

2. **SECTION IV**, **BUDGET,** of the Contract, is amended to increase funding in the amount of **$150,358.00** for State Fiscal Year 2023 ("FY 2023"). The total not-to-exceed amount of this Contract is increased to **$809,311.00.** All expenditures of the additional funds must conform with **ATTACHMENT B-4, FY 2023 BUDGET.**

3. **ATTACHMENT A-1, REVISED STATEMENT OF WORK**, of the Contract, is deleted and replaced in its entirety with **ATTACHMENT A-2, FY 2023 STATEMENT OF WORK**.

4. **ATTACHMENT B-3, REVISED BUDGET**, of the Contract, is supplemented with the addition of **ATTACHMENT B-4, FY 2023 BUDGET**.

5. **ATTACHMENT H-2, IMMUNIZATION/LOCALS PROGRAM GUIDANCE DOCUMENT** is deleted and replaced in its entirety with **ATTACHMENT H-3, IMMUNIZATION/LOCALS PROGRAM GUIDANCE DOCUMENT**.

6. This Amendment shall be effective September 1, 2022.

7. Except as modified by this Amendment, all terms and conditions of the Contract, as amended, shall remain in full force and effect.

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8. Any further revisions to the Contract shall be by written agreement of the Parties.

SIGNATURE PAGE FOLLOWS

DocuSign Envelope ID: F7074D00-FCA1-4828-B028-1017C8167098

SIGNATURE PAGE FOR AMENDMENT NO. 4
DSHS CONTRACT NO. HHS000102800001

DEPARTMENT OF STATE HEALTH SERVICES

By: DocuSigned by: Imelda Garcia 87AFD32AD9D24A9...

Date of Signature: May 6, 2022

MIDLAND HEALTH AND SENIOR SERVICES

By: DocuSigned by: Whitney Craig, Dr.PH, MPH 83EBFB35036D49F...

Date of Signature May 5, 2022

THE FOLLOWING DOCUMENTS ARE ATTACHED TO THIS AMENDMENT AND THEIR TERMS ARE INCORPORATED INTO THE CONTRACT BY REFERENCE:

ATTACHMENT A-2 – FY 2023 STATEMENT OF WORK
ATTACHMENT B-4 - FY 2023 BUDGET
ATTACHMENT F-4 - FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT (FFATA)
ATTACHMENT H-3 - IMMUNIZATION/LOCALS PROGRAM GUIDANCE DOCUMENT

ATTACHMENTS FOLLOW

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ATTACHMENT A-2
FY 2023 STATEMENT OF WORK

I. GRANTEE RESPONSIBILITIES

Grantee will:

A. Implement and operate an immunization program for children, adolescents, and adults, with special emphasis on accelerating interventions to improve the immunization coverage of children three (3) years of age or younger (birth to 35 months of age). Grantee shall incorporate traditional and non-traditional systematic approaches designed to eliminate barriers, expand immunization capacity, and establish uniform operating policies, as described herein.

B. Be enrolled as a provider in the Texas Vaccines for Children (TVFC) and the Adult Safety Net (ASN) Programs by the effective date of this Contract. This includes a signed *Deputization Addendum Form (EF11-13999).*

C. Comply with written policies and procedures provided by DSHS in managing vaccines supplied through the ASN and TVFC Programs, including guidelines for proper storage, handling, and safeguarding of vaccines in the event of natural disaster.

D. Adhere to DSHS Immunization updated guidance according to Attachment H-3, Immunization/Locals Program Guidance Document.

E. Maintain staffing levels to meet required activities of the Contract and ensure staff funded by this Contract attend required training.

F. Report all notifiable conditions as specified in Texas Administrative Code (TAC) Title 25, Part I §§ 97.1-97.6, as amended, and as otherwise required by law.

G. Report all vaccine adverse event occurrences in accordance with the 1986 National Childhood Vaccine Injury Act (NCVIA) 42 U.S.C. § 300aa-25 (located at http://vaers.hhs.gov/ or 1-800-822-7967), as amended.

H. Sustain a network of TVFC/ASN providers to administer vaccines to program-eligible populations by conducting the following activities:
   1. Ensuring New Provider Checklist is completed;
   2. Conducting quality assurance reviews;
   3. Ensuring annual influenza pre-book survey is completed;
   4. Conducting compliance site-visits;
   5. Conducting unannounced storage and handling visits; and
   6. Ensuring providers adhere to the vaccine borrowing procedure.

I. Participate in audits and assessments through the following activities:

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1. Completing and submitting through Child Health Reporting System (CHRS) all audits and assessments conducted on childcare facilities and Head Start Centers;
2. Completing audits, assessments and retrospective surveys of public and private schools;
3. Reviewing monthly reports to ensure data quality;
4. Reviewing the monthly Provider Activity Reports;
5. Reviewing the quarterly Consent Accepted Rate Evaluations; and
6. Conducting quality improvement assessments of Texas Immunization Registry organizations.

J. Provide education and outreach activities regarding vaccines and vaccine-preventable diseases, Texas Immunization Registry, and TVFC and ASN Programs to the following:
   1. American Indian Tribes;
   2. Schools and childcare facilities;
   3. Healthcare workers; and
   4. Community and general public.

K. Not deny vaccinations to recipients because they do not reside within Grantee's jurisdiction or because of an inability to pay an administration fee.

L. Be responsible for identification and case management of all hepatitis B surface antigen (HBsAg)-positive pregnant women. Grantee shall ensure timely newborn post-exposure prophylaxis (PEP) with hepatitis B vaccine and hepatitis B immune globulin (HBIG), timely completion of doses two and three of hepatitis B vaccine, and timely completion of post-vaccination serologic testing (PVST).

M. Be responsible for assessing and/or auditing coverage rates and/or compliance with vaccine requirements at assigned schools and childcare facilities in accordance with the Population Assessment Manual, which is distributed annually from DSHS.

N. Transfer (which may include shipping) overstocked vaccines and vaccines approaching expiration to alternate providers for immediate use when instructed to do so by the DSHS Public Health Region (PHR) Immunization Program Manager to avoid vaccine waste. Grantee is responsible for covering the cost to ship overstocked vaccines and vaccines approaching expiration.

O. Receive written approval from DSHS before varying from applicable policies, procedures, protocols, and/or work plans, and must update and disseminate its implementation documentation to its staff involved in activities under this Contract within forty-eight (48) hours of making approved changes.

P. Review monthly Contract funding expenditures and salary savings from any Contract-paid staff vacancies and revise spending plan to ensure that all funds will be properly expended under this Contract before the end of the Contract term.

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Q. Submit out-of-state travel requests to the Immunization Section for approval when utilizing Contract funds or program income.

R. Report the number of doses administered to underinsured children monthly, as directed by DSHS.

S. Report the number of unduplicated underinsured clients served, as directed by DSHS.

T. Complete and submit Immunization Inter-Local Agreement (ILA) Quarterly Report form, utilizing the format provided by the DSHS Immunization Section and available at https://dshs.texas.gov/immunize/lhd.shtm, by the report due date. If the due date falls on a weekend or state approved holiday, the report is due the next business day.

Report Type	Reporting Period	Report Due Date
Programmatic	09/1/2022 to 11/30/2022	12/31/2022
Programmatic	12/1/2022 to 02/28/2023	03/31/2023
Programmatic	03/1/2023 to 05/30/2023	06/30/2023
Programmatic	06/1/2023 to 08/31/2023	09/30/2023

Submit quarterly reports electronically through an online tool according to the timeframes stated above. DSHS Immunization Section will provide instructions at the beginning of each state fiscal year through CMS. Supplemental report documents (PEAR and AFIX reports, vacancy letters, etc.) should be sent to dshsimmunizationcontracts@dshs.texas.gov.

II. PERFORMANCE MEASURES

A. The System Agency will monitor the Grantee's performance of the requirements in this Attachment A-2 and compliance with the Contract's terms and conditions.

III. INVOICE AND PAYMENT

A. Grantee shall request monthly payments using the State of Texas Purchase Voucher (Form B-13) at http://www.dshs.texas.gov/grants/forms.shtm and submitting acceptable supporting documentation for reimbursement of the required services/deliverables. Vouchers and supporting documentation shall be submitted to System Agency no later than thirty (30) days after the last day of each month. Documentation shall be submitted in a format approved by DSHS Immunization Section.

At a minimum vouchers should include:

1. Grantee name, address, email address, vendor identification number, and telephone number;

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2. DSHS Contract or Purchase Order number;
3. Dates services were completed and/or products were delivered;
4. The total invoice amount; and
5. DSHS Supporting documentation.

B. Voucher and supporting documentation shall be mailed or submitted by fax or electronic mail to DSHS Claims Processing Unit at the address/number below, and to the Immunization Section at DSHSImmunizationContracts@dshs.texas.gov.

Department of State Health Services
Claims Processing Unit, MC 1940
1100 West 49th Street
P.O. Box 149347
Austin, TX 78714-9347
FAX: (512) 458-7442
EMAIL: invoices@dshs.texas.gov and to CMSinvoices@dshs.texas.gov

Grantee will be paid on a cost reimbursement basis and in accordance with the Budget in Attachment B-4, FY 2023 Budget of this Contract.

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ATTACHMENT B-4

FY 2023 BUDGET

Organization Name: Midland Health and Senior Services

Program ID: IMM/LOCALS

Contract Number: HHS000102800001

Budget Categories	**Budget for FY 2023** September 1, 2022 - August 31, 2023
Personnel	$105,000.00
Fringe	$45,150.00
Travel	$0.00
Supplies	$208.00
Equipment	$0.00
Contractual	$0.00
Other	$0.00
Total Direct	$150,358.00
Indirect	$0.00
Total	**$150,358.00**

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ATTACHMENT F-4

Fiscal Federal Funding Accountability and Transparency Act (FFATA) CERTIFICATION

The certifications enumerated below represent material facts upon which DSHS relies when reporting information to the federal government required under federal law. If the Department later determines that the Contractor knowingly rendered an erroneous certification, DSHS may pursue all available remedies in accordance with Texas and U.S. law. Signor further agrees that it will provide immediate written notice to DSHS if at any time Signor learns that any of the certifications provided for below were erroneous when submitted or have since become erroneous by reason of changed circumstances. ***If the Signor cannot certify all of the statements contained in this section, Signor must provide written notice to DSHS detailing which of the below statements it cannot certify and why.***

Legal Name of Contractor:	**FFATA Contact # 1 Name, Email and Phone Number:**
City of Midland Health Department	Whitney Craig wcraig@midlandtexas.gov 432-681-7645
Primary Address of Contractor: 3303 W. Illinois Ave Sp.22 Midland, TX 79703	**FFATA Contact #2 Name, Email and Phone Number:** Crystal Garcia crgarcia@midlandtexas.gov 432-685-7218
ZIP Code: 9-digits Required www.usps.com 79703-6213	**DUNS Number: 9-digits Required www.sam.gov** 073186579
State of Texas Comptroller Vendor Identification Number (VIN) 14 Digits 17560006086016	

Printed Name of Authorized Representative	**Signature of Authorized Representative**
Whitney Craig	DocuSigned by: Whitney Craig, Dr.PH, MPH 3EBFB35036D49F...
Title of Authorized Representative Health Services Manager	**Date** May 5, 2022

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Fiscal Federal Funding Accountability and Transparency Act (FFATA) CERTIFICATION

As the duly authorized representative (Signor) of the Contractor, I hereby certify that the statements made by me in this certification form are true, complete and correct to the best of my knowledge.

Did your organization have a gross income, from all sources, of less than $300,000 in your previous tax year? ☐ Yes ☒ No

If your answer is "Yes", skip questions "A", "B", and "C" and finish the certification.
If your answer is "No", answer questions "A" and "B".

A. Certification Regarding % of Annual Gross from Federal Awards.

Did your organization receive 80% or more of its annual gross revenue from federal awards during the preceding fiscal year? ☐ Yes ☒ No

B. Certification Regarding Amount of Annual Gross from Federal Awards.

Did your organization receive $25 million or more in annual gross revenues from federal awards in the preceding fiscal year? ☐ Yes ☒ No

If your answer is "Yes" to both question "A" and "B", you must answer question "C".
If your answer is "No" to either question "A" or "B", skip question "C" and finish the certification.

C. Certification Regarding Public Access to Compensation Information.

Does the public have access to information about the compensation of the senior executives in your business or organization (including parent organization, all branches, and all affiliates worldwide) through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986? ☐ Yes ☐ No

If your answer is "Yes" to this question, where can this information be accessed?

N/A

If your answer is "No" to this question, you must provide the names and total compensation of the top five highly compensated officers below.

Provide compensation information here:

N/A

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ATTACHMENT H-3
IMMUNIZATION/LOCALS PROGRAM GUIDANCE DOCUMENT
GRANTEE RESPONSIBILITIES

1. PROGRAM & CONTRACT MANAGEMENT

1.1. PROGRAM MANAGEMENT

1.1.01	Implement and operate an Immunization Program as a Responsible Entity	Standard (Universal)
1.1.02	Identify at least one individual to act as the program contact in the following areas: 1. Immunization Program Manager; 2. RE Contract Coordinators; 3. RE School Compliance Coordinators; 4. RE Perinatal Hepatitis B Case Manager; 5. RE Disease Surveillance Coordinators; 6. RE Clinical Coordinators; 7. RE Texas Immunization Registry Coordinators; 8. RE TVFC & ASN Coordinators; and 9. RE Coalition Coordinators	Required Activity
1.1.03	Attend all required trainings for each Area of Work as specified in the Immunization Program Contractor's Guide. Ensure that the Immunization Program Manager and TVFC and ASN Coordinator attend the annual Immunization Unit mandatory in-person meeting	Required Activity
1.1.04	Comply with the DSHS Immunization Contractor's Guide for Local Health Departments which includes all immunization grant objectives and required activities. The Immunization Contractor's Guide is Attachment A of the ILA and will be attached to the executed contract	Standard (Universal)
1.1.05	Annually complete one LHD Deputization Addendum Form (EF11-13999) for all Provider Identification Numbers (PIN) associated with the LHD Grantee to ensure eligibility to provide immunization services to underinsured children	Required Activity
1.1.06	Maintain staffing levels adequate to meet the required activities of this contract and to assure expenditure of all contract funds	Standard (Universal)

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1.1.07	Develop and implement an employee immunization policy for Grantee's immunization program staff according to CDC recommendations	Required Activity
1.1.08	Maintain a record of orientation (new staff) and ongoing training for existing contract-funded staff involved in the provision of immunization services	Required Activity
1.1.09	Inform DSHS (in writing) of any changes (both departures and arrivals) in LHD Medical Director, Immunization Program Manager and all other positions listed under activity 1.1.02 within 30 days of staffing changes	Required Activity
1.1.10	Submit a written notification for contract-funded staff positions that remain vacant more than 90 days	Required Activity
1.1.11	Have a standard method to document all work time spent performing immunization activities for staff who are partially funded with immunization contract funds	Standard (Universal)
1.1.12	Use the results of the community assessment conducted in activity 4.7.01 to review and address an immunization need within the LHD jurisdiction	Suggested Activity

1.2. PROGRAM COMPLIANCE

1.2.01	Comply with all applicable federal and state regulations and statutes as amended, including, but not limited to: 1. Texas Human Resources Code §42.043; 2. Texas Education Code §§38.001-38.002; 3. Texas Health and Safety Code §§12.032-12.033, 81.023, and 161.001-161.009; 4. Texas Administrative Code (TAC) Title 25, Chapter 97; 5. TAC Title 25, Chapter 96; 6. TAC Title 25, Chapter 100; 7. 42 USC §§247b and 300aa-25; 8. Omnibus Budget Reconciliation Act of 1993; and 9. 26 USC §4980B	Standard (Universal)
1.2.02	Ensure compliance with Health and Human Services (HHS) Deputization Guidance. Activities under this requirement shall be conducted in accordance with the DSHS Immunization Contractor's Guide for Local Health Departments	Standard (Universal)

1.3. FINANCIAL MANAGEMENT

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1.3.01	Agree DSHS reserves the right, where allowed by legal authority, to redirect funds in the event of financial shortfalls	Standard (Universal)
1.3.02	Submit monthly invoices with appropriate supplemental documentation and request monthly payments using the State of Texas Purchase Voucher (Form B-13) and in accordance with the DSHS Immunization Contractor's Guide for Local Health Departments	Required Activity
1.3.03	Agree DSHS will pay Grantee on a cost reimbursement basis	Standard (Universal)
1.3.04	Adhere to travel rates set by the State of Texas TexTravel unless the LHD has their own travel policy.	Standard (Universal)
1.3.05	Review monthly contract funding expenditures to ensure that all funds will be properly expended before the end of the contract period	Standard (Universal)
1.3.06	Lapse no more than 5 percent of total funded amount of the contract	Required Activity
1.3.07	Submit requests to move more than 25% of the total contract amount between direct budget categories in writing to the DSHS Contract Management Section (CMS) in Austin and obtain approval before monies can be transferred	Standard (When Applicable)
1.3.08	Expend funds consistently throughout the contract term, approximately 25% per quarter	Suggested Activity

1.4. CONTRACT MANAGEMENT

1.4.01	Initiate the purchase of approved equipment purchases in the first quarter of the Contract term. Requests to purchase previously approved equipment after the first quarter must be submitted to the contract manager. Changes to the approved equipment budget category must be approved by DSHS prior to the purchase of equipment. If a Grantee would like to deviate from the approved equipment budget, a written request to amend the budget is required	Standard (When Applicable)

1.5. CONTRACT QUALITY ASSURANCE

1.5.01	Participate in remote and on-site technical assistance	Required Activity
1.5.02	Participate in on-site contract evaluation visits	Required Activity

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1.6. CONTRACT ACCOUNTABILITY

1.6.01	Submit Corrective Action Plan (CAP) letter to Public Health Region Program Manager and DSHS Contract Management Section (CMS) within 30 days after the date of the written notification from DSHS CMS of the on-site evaluation findings (if applicable)	Required Activity
1.6.02	Maintain property records for property and equipment funded or property provided by grant funds	Standard (Universal)

1.7. REQUIRED REPORTING

1.7.01	Complete and submit Immunization Inter-Local Agreement (ILA) Quarterly Report and supplemental documents according to the formats, mechanisms, and timeframes specified in the DSHS Immunization Contractor's Guide for Local Health Departments	Required Activity
1.7.02	Report program income (PI) generated as a result of the DSHS immunization contract activities on the quarterly financial status report (FSR)	Required Activity
1.7.03	Ensure all program income (PI) generated as a result of the DSHS immunization contract activities is expended in accordance with the DSHS Immunization Contractor's Guide for Local Health Departments	Standard (Universal)
1.7.04	Submit quarterly FSRs to Accounts Payable by the last business day of the month following the end of each quarter for review and financial assessment. Submit the final FSR no later than forty-five (45) calendar days following the end of the applicable term	Required Activity

2. FACILITY IMMUNIZATION ASSESSMENTS

2.1. CHILDCARE & SCHOOL COMPLIANCE

2.1.01	Assess compliance with vaccine requirements at assigned schools and childcare facilities	Standard (Universal)
2.1.02	Complete 100% of assigned childcare facility audits/assessments. By July 15 of contract year, local health department staff will complete 100% of assigned childcare audits and submit into the Child Health Reporting System (CHRS)	Required Activity

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2.1.03	Complete 100% of assigned public and private school audits, assessments, and/or validation/retrospective surveys in accordance with the DSHS Immunization Contractor's Guide for Local Health Departments by June 15 of contract year, local health department staff will complete 100% of assigned school audits and submit electronically (Alchemer, possibly via email)	Required Activity

2.2. CHILDCARE & SCHOOL COMPLIANCE QA

2.2.01	Provide education to school and childcare facilities with high provisional, delinquency, and/or exemption rates at time of audit or when noncompliant records are identified. Report education provided to school or childcare staff in accordance with the DSHS Immunization Contractor's Guide for Local Health Departments	Required Activity
2.2.02	Provide feedback to DSHS ACE Group regarding trends/issues for vaccine requirements in accordance with the DSHS Immunization Contractor's Guide for Local Health Departments	Required Activity
2.2.03	Contact schools/districts to remind them to report during the Annual School Survey reporting period in accordance with the DSHS Immunization Contractor's Guide for Local Health Departments	Required Activity

2.3. FIRST RESPONDER IMMUNIZATION ASSESSMENTS

2.3.01	Educate and inform first responder facilities on the use of the Texas Immunization Registry to assess first responder immunization records and forecast any future immunization needs. Use the First Responder Immunization Toolkit (FRIT) to drive these activities	Suggested Activity

3. MANAGING TVFC AND ASN PROVIDERS

3.1. PROVIDER RECRUITMENT

3.1.01	Recruit additional TVFC providers to administer vaccines to program-eligible populations. The goal is to increase each local health department's provider enrollment by 5%	Suggested Activity

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3.1.02	Ensure New Enrollment Checklist (11-15016) is completed for all clinics that join the TVFC/ASN Program	Required Activity
3.1.03	Collaborate with medical societies and/or local health provider organizations to identify providers to recruit and enroll	Suggested Activity

3.2. PROVIDER RETENTION

3.2.01	Sustain a network (through re-enrollment) of TVFC providers to administer vaccines to program-eligible populations	Required Activity
3.2.02	Promote TVFC and ASN Provider achievements: - Implement incentives for provider sites that reach vaccination coverage rate goals; and - Implement incentives to recognize sites during national observances (i.e. NIIW, NIAM, and NIVW)	Suggested Activity

3.3. PROVIDER EDUCATION

3.3.01	Provide a training for TVFC and ASN providers within the LHD Grantee's jurisdiction on the policies outlined in the TVFC and ASN Provider Manual and recommended procedures for implementing them. These include: - procedures for following storage and handling guidelines; - procedures for vaccine management; - procedures for using the DSHS vaccine management system (VAOS); - procedures for vaccine borrowing; - procedures for other compliance guidelines; - appropriate reporting of vaccine adverse events; - appropriate routine and emergency vaccine storage and handling plans; and - meeting the federal requirement that the most current Vaccine Information Statements (VIS) available at https://www.cdc.gov/vaccines/hcp/vis/index.html distributed to patients prior to patient vaccination	Suggested Activity

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3.3.02	Notify providers of TVFC and ASN updates and changes to program policies and procedures. Notify TVFC/ASN providers of the following: - CDC and DSHS Announcements; - TVFC/ASN Trainings; - Vaccine storage and handling policy updates; - Vaccine ordering changes; and - Vaccine choice	Standard (Universal)
3.3.03	Educate and assist TVFC and ASN providers on a quarterly basis with Provider Choice, as necessary	Standard (Universal)
3.3.04	Inform TVFC and ASN providers of the most up-to-date, DSHS-produced immunization information for their offices	Standard (Universal)
3.3.05	Identify TVFC and ASN providers experiencing high volumes of vaccine loss and develop process improvements/trainings aimed at reducing the amount of vaccine loss (including wasted and expired) in their clinics	Required Activity

3.4. PROVIDER VACCINE MANAGEMENT

3.4.01	Utilize the DSHS Vaccine Allocation and Ordering System (VAOS) reports and other provider submitted reports to perform 100% of quality assurance reviews on the following TVFC and ASN: - monthly biological reports (doses administered and current inventory); - vaccine orders; - temperature log; and - clinic hours of operation from TVFC and ASN providers in LHD Grantee's jurisdiction. Address all issues identified during review	Required Activity
3.4.02	Transfer vaccines that cannot be stored within provider offices (ex. accidental large orders) and vaccines approaching expiration between providers in LHD Grantee's jurisdiction for immediate use	Standard (Universal)

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3.4.03	Ensure provider participation in vaccine ordering and inventory management using the Vaccine Allocation and Ordering System (VAOS): - Educate providers regarding vaccine ordering policies; and - Train providers to use VAOS for inventory and order entry	Standard (Universal)
3.4.04	Assist TVFC and ASN providers in LHD Grantee's jurisdiction on the maintenance of appropriate vaccine stock levels. Activities under this requirement shall be conducted in accordance with the DSHS Immunization Contractor's Guide for Local Health Departments and the current TVFC and ASN Program Operations Manual for Responsible Entities	Standard (Universal)
3.4.05	Train TVFC and ASN providers within LHD Grantee's jurisdiction to ensure that expired and spoiled/wasted vaccines are appropriately identified and entered into the Vaccine Allocation and Ordering System (VAOS). Train providers to complete returns to CDC's centralized distributor within six months of product expiration	Standard (Universal)
3.4.06	Ensure that 100% of TVFC providers within the LHD Grantee's jurisdiction complete the annual influenza pre-book survey	Required Activity

3.5. PROVIDER QUALITY ASSURANCE

3.5.01	Utilize the CDC Provider Education Assessment and Reporting (PEAR) system and CDC Immunization Quality Improvement for Providers (IQIP) database to document TVFC compliance and IQIP site visits for all subcontracted clinics and non-LHD Grantee's clinics (as applicable)	Required Activity
3.5.02	Utilize the CDC PEAR system and directly enter data into PEAR to document TVFC unannounced storage and handling visits to a minimum of 10% of providers within the LHD Grantee's jurisdiction	Required Activity
3.5.03	Utilize the CDC PEAR system and directly enter data into PEAR to document TVFC Unannounced Storage and Handling Visits, Compliance Visits and other visits conducted at TVFC provider offices	Required Activity
3.5.04	Complete and document 100% of the follow-up activities for TVFC quality assurance visits within required timeframes	Required Activity

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3.5.05	Utilize Texas Immunization Registry or DSHS-provided coverage rates to assess immunization practices and coverage rates for all subcontracted entities and non-LHD Grantee's clinics (as applicable)	Required Activity
3.5.06	Review 100% of re-enrollment applications from TVFC and ASN providers in your jurisdiction by the DSHS specified deadline	Required Activity
3.5.07	Ensure that expired, wasted, and unaccounted-for vaccines (excluding flu) do not exceed 5% in TVFC provider clinics within the LHD Grantee's jurisdiction	Standard (Universal)
3.5.08	Review monthly reports to ensure data quality. This includes: - Identify sites that have not administered or ordered vaccine in the previous six months. Conduct a discussion and develop a plan of action; - Identify sites that are suspended to ensure 90 days is not exceeded; and - Ensure enrollment and withdrawal forms are submitted correctly and on time to the PHR staff	Required Activity
3.5.09	Review submitted reports to ensure data quality. This includes: - Quarterly, review 25% of enrolled sites to ensure contacts are listed correctly in Syntropi; and - Quarterly, review 25% of enrolled sites and provide education for the Vaccine borrowing and Vaccine transfer forms	Suggested Activity
3.5.10	Review monthly data logger reports for 25% of providers in LHD Grantee's jurisdiction to validate the accuracy of provider-submitted monthly temperature reporting forms	Suggested Activity
3.5.11	Review monthly data logger reports to validate the accuracy of provider-submitted monthly temperature reporting forms for all providers within LHD Grantee's jurisdiction who experience a vaccine loss as a result of temperature excursions	Standard (Conditional)
3.5.12	Conduct a monthly review of 10% of randomly selected providers in LHD Grantee's jurisdiction to identify vaccine loss report forms that were completed in VAOS but were not submitted	Suggested Activity
3.5.13	Conduct a quarterly review of 25% of providers in LHD Grantee's jurisdiction to identify those that have adjusted more than 10% of their vaccine inventory	Suggested Activity
3.5.14	Conduct a quarterly review of 25% of providers in LHD Grantee's jurisdiction to ensure the reported patient population matches the number of doses ordered	Suggested Activity

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3.5.15	Utilize the CDC IQIP database and directly enter data to document IQIP follow-ups visits conducted at TVFC provider offices	Required Activity

3.6. PROVIDER ACCOUNTABILITY

3.6.01	Track, report and follow up on vaccine fraud and abuse cases	Standard (Universal)
3.6.02	Complete program evaluation activities with TVFC and ASN providers to address issues identified as noncompliance issues For all TVFC providers, document corrective action plans in the CDC PEAR system as a contact	Required Activity

3.7. RE STAFF EDUCATION

3.7.01	Train LHD Grantee's staff to follow the policies and procedures outlined in the TVFC & ASN Program Operations Manual for Responsible Entities. Provide training on TVFC and ASN requirements and updates (as described in the TVFC & ASN Program Operations Manual for Responsible Entities) annually at a minimum	Required Activity
3.7.02	For personnel identified by DSHS, attend and/or complete the following trainings: - CDC Immunization Trainings; - TVFC/ASN Annual Trainings; - Annual Responsible Entity Training; and - Public Health Region (PHR) Trainings	Required Activity
3.7.03	Ensure that the TVFC & ASN Coordinator conducts quality assurance on 10% of the temperature recording logs that were reviewed by their staff each quarter	Suggested Activity

3.8. RE COMPLIANCE

3.8.01	Comply with the current DSHS Immunization Contractor's Guide for Local Health Departments and the TVFC and ASN Operations Manual for Responsible Entities	Standard (Universal)
3.8.02	Receive regional approval for any vaccine transfers and document those transfers in VAOS within 24 hours of the transfer occurring	Standard (Universal)

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3.8.03	Address general inquiries by providers about the TVFC/ASN Program, and ensure timely follow-up on requests for information	Standard (Universal)
3.8.04	Ensure that providers within LHD Grantee's jurisdiction are adhering to the vaccine borrowing procedures outlined in the TVFC and ASN Provider Manual Report the number of borrowing forms submitted by quarter in the Immunization Inter-Local Agreement (ILA) Quarterly Report	Required Activity

3.9. RE EMERGENCY RESPONSE

3.9.01	Communicate the importance of an Emergency Vaccine Storage and Handling Plan to all clinics in the LHD Grantee's jurisdiction. Provide technical assistance to support the successful activation of each clinic's *Emergency Vaccine Storage and Handling Plan*	Standard (Universal)
3.9.02	Transfer, accept, and store TVFC and ASN vaccines from clinics in the LHD Grantee's jurisdiction if there is a failure in the clinic's *Emergency Vaccine Storage and Handling Plan*	Standard (Universal)
3.9.03	Be prepared to pack and ship vaccine to other sites, as directed by the DSHS Immunization Unit	Required Activity

4. EPIDEMIOLOGY & SURVEILLANCE

4.1. PERINATAL HEPATITIS B CASE IDENTIFICATION

4.1.01	Conduct identification and case management of perinatal hepatitis B cases	Standard (Universal)
4.1.02	Determine the number of newborns that do not receive the first dose of the hepatitis B vaccine and/or HBIG and work with those facilities to ensure all at-risk infants receive the hepatitis B vaccine series and HBIG within 12 hours of birth	Required Activity
4.1.03	Ensure timely follow-up and reporting of case status of possible moms as reported by DSHS within 2 weeks of receipt of report	Required Activity

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4.2. PERINATAL HEPATITIS B CASE MANAGEMENT

4.2.01	Contact and provide case management to 100% of hepatitis B surface antigen-positive pregnant women identified, along with their infants and contacts	Required Activity

4.3. PERINATAL HEPATITIS B REPORTING

4.3.01	For all cases documented as 'lost-to-follow-up' on the Perinatal Hepatitis B case management form, report the number and types of attempted activities performed in locating the mother or guardian of the infant to the DSHS Immunization Unit on the Perinatal Hepatitis B case management form	Required Activity

4.4. PERINATAL HEPATITIS B EDUCATION

4.4.01	Require Perinatal Hepatitis B Case Manager to attend the biannual conference	Required Activity
4.4.02	Conduct educational training for hospitals, prenatal care providers, pediatricians, birthing facilities, and other healthcare providers/facilities within the Grantee's jurisdiction, to increase identification, timely reporting, and appropriate case management of pregnant woman with hepatitis and their infants and contacts.	Required Activity
4.4.03	Work with partners, as appropriate, to ensure coordination of activities aimed at preventing perinatal hepatitis B transmission	Standard (Universal)

4.5. DISEASE SURVEILLANCE

4.5.01	Complete investigation and document at least 90% of confirmed or probable reportable vaccine-preventable disease (VPD) cases within thirty (30) days of initial report to public health	Required Activity
4.5.02	Adhere to the DSHS Emerging and Acute Infectious Disease Guidelines and current Epi Case Criteria Guide in conducting all activities	Standard (Universal)

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4.5.03	Ensure all new VPD surveillance staff attend 'Introduction to NBS' training and complete the certification process in order to gain access to the NBS system	Required Activity
4.5.04	Complete all data entry into the Texas National Electronic Disease Surveillance System (NEDSS) Base System (NBS) following the NBS Data Entry Guidelines	Standard (Universal)
4.5.05	Routinely review and follow up on all VPD laboratory reports received, including electronic lab reports (ELRs) generated through NBS in a timely fashion	Standard (Universal)
4.5.06	Verify and enter complete vaccination history in NBS on all VPD investigations with case status of confirmed or probable. Complete vaccination history can be assessed through the Texas Immunization Registry, provider offices, school records, and/or patient records	Required Activity
4.5.07	Initiate vaccine-based disease control activities by identifying population in need of a vaccination response and requesting vaccination services for that population by contacting the DSHS Vaccine-Preventable Disease (VPD) Surveillance Team Lead	Standard (Universal)

4.6. DISEASE SURVEILLANCE EDUCATION

4.6.01	Educate physicians, laboratories, hospitals, schools, child-care staff, and other health providers on VPD reporting requirements	Suggested Activity

4.7. NEEDS ASSESSMENT

4.7.01	Conduct a community needs assessment to identify gaps in coverage rates or “pockets of need” for immunization activities. • Select an area of focus from the list of measurements provided in the Metrix or obtain approval from Immunization Unit epis for an alternate area of focus. • Create an assessment plan, collect data, gather stakeholder feedback, and analyze the information	Required Activity
4.7.02	Design an intervention to address the need identified in 4.7.01	Suggested Activity

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5. PROVIDING A VACCINE SAFETY NET

5.1. CLINIC ENROLLMENT

5.1.01	Enroll all eligible LHD clinics into the TVFC and ASN Programs as providers	Required Activity
5.1.02	Provide immunization services according to national standards for immunization practices for infants, children, adolescents, adults, and healthcare workers. LHD clinics will comply with the National Childhood Vaccine Injury Act of 1986	Standard (Universal)

5.2. CLINIC STAFF TRAINING

5.2.01	Train all clinic staff on the policies outlined in the TVFC and ASN Provider Manual and LHD procedures for implementing them. These include: - procedures for following storage and handling guidelines; - procedures for vaccine management; and - procedures for using the DSHS vaccine management system (VAOS) procedures for other compliance guidelines	Required Activity
5.2.02	Develop clinic staff education requirements. Ensure that persons who administer vaccines and staff that are involved in the vaccine administration process (including those who screen immunization records and administer vaccines) to follow Advisory Committee on Immunization Practices (ACIP) standards for children and adults and are knowledgeable on immunizations and immunization practices This can be accomplished by having staff complete the most current CDC Pink Book (Epidemiology and the Prevention of Vaccine Preventable Diseases) training and appropriate Vaccine Education Online (VEO) modules	Required Activity
5.2.03	Develop eligibility screening and documentation policy for all LHD clinics. Provide training to all staff on appropriate screening and documentation for TVFC eligibility to ensure TVFC vaccine is administered only to TVFC-eligible children. Implement policy and plan for routine adherence to eligibility policies	Required Activity

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5.2.04	Develop and implement a policy on the use of the Texas Immunization Registry. Train LHD staff on conducting client searches in the Texas Immunization Registry and how to effectively enter client demographic and immunization information	Required Activity

5.3. CLINIC IMMUNIZATION PRACTICES

5.3.01	Comply with current applicable state and federal standards, policies and guidelines for clinics	Standard (Universal)
5.3.02	Provide vaccines regardless of residency or ability to pay	Standard (Universal)
5.3.03	Adhere to clinical records retention schedule	Standard (Universal)
5.3.04	Explain the benefits of a "medical home" and assist the parent/guardian in obtaining or identifying the child's medical home	Standard (Universal)
5.3.05	Discuss the next ACIP-recommended vaccines and refer the client to a medical home to complete the vaccination series	Standard (Universal)
5.3.06	Maintain a list of current providers within the LHD's jurisdiction who accept children on Medicaid or CHIP and make this list available to clinic clients and families as needed	Standard (Universal)
5.3.07	Refer uninsured clients to Medicaid or the Children's Health Insurance Program (CHIP) as appropriate	Standard (Universal)
5.3.08	Ensure that all ACIP-recommended vaccines are routinely available and offered to TVFC patients	Standard (Universal)
5.3.09	Ensure that all vaccines listed on the ASN vaccine formulary are available and offered to eligible adult patients	Standard (Universal)
5.3.10	Establish "standing orders" for vaccination in LHD Grantee's clinics that are consistent with legal requirements for standing orders (including, but not limited to, those found in the Texas Medical Practice Act)	Required Activity
5.3.11	Search for the client's immunization history at every client encounter. Compare all immunization histories (Texas Immunization Registry, TWICES or EMR system, validated patient-held records, clinic medical record) and enter into the Texas Immunization Registry all historical immunizations not in the Registry at every client encounter. Review the client's record for vaccines due and overdue according to the CDC recommended schedules at: https://www.cdc.gov/vaccines/schedules/index.html	Standard (Universal)

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5.3.12	Offer updated Immunization History Report to the client or client's parent or guardian at every client encounter	Standard (Universal)
5.3.13	Follow and explain recommended guidelines for obtaining and submitting ImmTrac2 consent forms according to the instructions found at http://www.dshs.texas.gov/immunize/immtrac/forms.shtm	Standard (Universal)
5.3.14	Report to the Texas Immunization Registry all immunizations administered to consented children (younger than 18 years of age) and consented adults in LHD Grantee's clinics, either by entering data directly into the Registry or through electronic data exchange via TWICES or an electronic medical record (EMR) system	Standard (Universal)
5.3.15	Verbally and with DSHS-produced literature, inform parents at LHD Grantee's clinics about the Texas Immunization Registry, the benefits of inclusion in the Registry, and the importance of maintaining a complete immunization history in the Registry	Standard (Universal)
5.3.16	Update all demographic information, including address, email, and telephone number, at every client encounter in EMR and the Texas Immunization Registry	Standard (Universal)
5.3.17	Verbally educate patients and parents/guardians about the benefits and risks of vaccination and distribute DSHS educational materials, as applicable, as part of this conversation	Standard (Universal)
5.3.18	Follow only medically supportable contraindications to vaccination	Standard (Universal)
5.3.19	Provide immunization services at times other than 8 am to 5 pm, Monday through Friday, at least once per month	Required Activity
5.3.20	Institute infection control practices, including effective hand washing and management of hazardous waste	Standard (Universal)
5.3.21	Maintain confidentiality of client information	Standard (Universal)
5.3.22	Recommend the simultaneous administration of all needed vaccines for the patient	Standard (Universal)
5.3.23	Implement clinic policy on screening and documentation of eligibility for TVFC vaccines. The policy must be consistent with the TVFC requirements outlined in the current TVFC and ASN Provider Manual	Standard (Universal)
5.3.24	Participate in public health emergencies and exercises that may require vaccine administration to the public or first responders	Suggested Activity

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5.3.25	Conduct outreach activities to raise the immunization coverage levels of uninsured adults by visiting sites such as homeless shelters, halfway houses, day labor sites or other locations	Suggested Activity
5.3.26	Coordinate with community vaccinators to conduct annual employee-based vaccination clinics for influenza vaccine administration	Suggested Activity

5.4. CLINIC VACCINE MANAGEMENT

5.4.01	Ensure that all expired and spoiled/wasted vaccines are appropriately identified and entered into the Vaccine Allocation and Ordering System (VAOS) for the LHD Grantee's clinics	Required Activity
5.4.02	Submit returns for all vaccines distributed via CDC's centralized distributor back to the centralized distributor for returns processing	Standard (Universal)

5.5. CLINIC QUALITY ASSURANCE

5.5.01	Ensure that appropriate routine and emergency vaccine storage and handling plans are in place at each of the LHD Grantee clinic locations	Required Activity
5.5.02	Ensure that expired, wasted, and unaccounted-for vaccines (excluding flu) do not exceed 5 percent in LHD Grantee's clinics	Standard (Universal)

5.6. CLINIC REPORTING

5.6.01	Conduct timely reporting of monthly clinic activities by recording vaccine inventory, doses administered, temperature logs and other reportable activities by the 5th of each month as described in the TVFC/ASN Provider Manual	Required Activity
5.6.02	Report all notifiable conditions as specified in the DSHS Immunization Contractor's Guide for Local Health Departments	Standard (Universal)
5.6.03	Report all vaccine adverse events as specified in the DSHS Immunization Contractor's Guide for Local Health Departments	Standard (Universal)

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5.6.04	Report the number of unduplicated underinsured clients and the number of doses administered to underinsured children monthly as specified in the DSHS Immunization Contractor's Guide for Local Health Departments	Required Activity
5.6.05	Conduct monthly reporting of doses administered to women veterans, as required in the ASN Program	Required Activity

6. INCREASING USE OF THE TEXAS IMMUNIZATION REGISTRY

6.1. TEXAS IMMUNIZATION REGISTRY OUTREACH FOR IMMUNIZATION RECORDS

6.1.01	Conduct Texas Immunization Registry outreach to organizations regarding missing vaccinations for children and adults for whom consent has been granted but who do not have complete immunization records	Suggested Activity

6.2. TEXAS IMMUNIZATION REGISTRY OUTREACH FOR PATIENT CONSENTS

6.2.01	Conduct activities aimed at increasing the consent rate for all age groups, including adults and individuals identified as recently moved in-state	Suggested Activity
6.2.02	Conduct at least twelve (12) outreach and educational activities focused on 18-year-olds in high schools and colleges/universities in LHD Grantee's jurisdiction	Required Activity

6.3. TEXAS IMMUNIZATION REGISTRY OUTREACH TO USERS

6.3.01	Conduct outreach to existing Registry users who have not logged into the Registry in the last 90 days	Required Activity
6.3.02	Provide orientation to all new Texas Immunization Registry organizations within the LHD Grantee's jurisdiction at least once a year and maintain documentation of all technical assistance provided (e.g., telephone logs) Provide education and training on the effective use of the Texas Immunization Registry according to the Guidelines for Increasing the Use of the Texas Immunization Registry Identify and assist newly registered providers and new users reporting to the Texas Immunization Registry	Suggested Activity

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6.4. TEXAS IMMUNIZATION REGISTRY USER EDUCATION

6.4.01	Provide education, training, and technical assistance to promote the effective use of the Texas Immunization Registry by organizations	Suggested Activity
6.4.02	Identify and assist providers to establish electronic affirmation of consent	Required Activity

6.5. TEXAS IMMUNIZATION REGISTRY PROMOTION

6.5.01	Promote the use of the Texas Immunization Registry to organizations within the LHD Grantee's jurisdiction that are not currently enrolled in the Registry. Identify all providers who administer vaccine in awardee's jurisdiction, including both pediatric and adult immunization providers. Educate them on their statutory requirement to report immunizations and on the enrollment process	Required Activity
6.5.02	Provide education and technical assistance to birth registrars on the effective use of the Texas Immunization Registry	Suggested Activity
6.5.03	Collaborate with prenatal healthcare providers, birth registrars, hospital staff, pediatricians, and other entities to educate parents, expectant parents, and providers about the Texas Immunization Registry and the benefits of participation. This includes the dissemination of DSHS educational materials as appropriate	Suggested Activity

6.6. TEXAS IMMUNIZATION REGISTRY PROGRAM QUALITY IMPROVEMENT

6.6.01	Review the monthly Provider Activity Report (PAR) to identify organizations who are inactive or not routinely submitting immunization data or adding consented clients. Prioritize these organizations for outreach activities	Required Activity
6.6.02	Review the quarterly Consent Accepted Rate Evaluation (CARE) report to target organizations with largest client volume and/or lowest consent acceptance rate. Prioritize these organizations for outreach activities	Required Activity

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6.6.03	Conduct a minimum of 60 Texas Immunization Registry organization quality improvement assessments per FTE each year as described in the Guidelines for Increasing the Use of the Texas Immunization Registry. (For jurisdictions with less than 60 orgs, conduct quality improvement assessment visits to 100% of your orgs)	Required Activity

7. EDUCATION AND PARTNERSHIPS

7.1 PUBLIC EDUCATION

7.1.01	Inform and educate the public about vaccines and vaccine-preventable diseases	Required Activity
7.1.02	Inform the general public about the TVFC and ASN Programs and the eligibility criteria for qualifying for the programs	Required Activity

7.2 PROVIDER EDUCATION

7.2.01	Educate and update providers on the most current ACIP recommendations for all age groups	Suggested Activity
7.2.02	Inform and highly recommend to the medical community and local providers within the LHD Grantee's jurisdiction the most current Centers for Disease Control and Prevention (CDC) Epidemiology and Prevention of Vaccine-Preventable Disease (EPI-VAC) training (https://www.cdc.gov/vaccines/ed/webinar-epv/index.html). The most current "Pink Book," titled Epidemiology and Prevention of Vaccine-Preventable Diseases, can be found on the CDC website at http://www.cdc.gov/vaccines/pubs/pinkbook/index.html	Suggested Activity
7.2.03	Provide information to community healthcare employers (hospitals, clinics, doctor offices, long-term care facilities) about the importance of vaccination of healthcare workers	Suggested Activity
7.2.04	Provide training relating to Standards for Child and Adolescent Immunization Practices and Standards for Adult Immunization Practices to all immunization providers within LHD Grantee's jurisdiction	Suggested Activity

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7.2.05	Provide training opportunities and/or resources to assist immunization providers in communicating with patients and/or parents (e.g., making a strong recommendation, addressing vaccine hesitancy, etc.)	Required Activity

7.3 STAFF EDUCATION

7.3.01	Work to ensure that all Immunization Program Grantee staff are knowledgeable about vaccines and VPDs	Standard (Universal)
7.3.02	Develop and implement a written communications and customer service plan for Grantee's staff to ensure customers receive consistent, correct immunization information and services in a courteous and friendly manner on a timely basis	Required Activity
7.3.03	Educate healthcare workers on the importance of keeping themselves up-to-date with the vaccine schedule	Required Activity

7.4 COALITION BUILDING

7.4.01	Appoint an immunization coalition coordinator	Required Activity
7.4.02	Attend and participate in required coalition trainings sponsored by DSHS	Required Activity
7.4.03	Develop and maintain a planning group with the goal of sustaining a coalition	Suggested Activity
7.4.04	Engage and recruit community groups and immunization stakeholders into a coalition	Suggested Activity
7.4.05	Facilitate and host coalition meetings	Suggested Activity
7.4.06	Participate in monthly calls to provide updates on coalition collaboration activities	Required Activity
7.4.07	Provide signed letters of agreement and other documentation of commitment to participate in coalition	Suggested Activity
7.4.08	Document communications, group meetings, and planning of activities that promote the best practices identified in contract agreement (documents are to be accessible during site visits)	Required Activity

7.5 COMMUNITY PARTNERSHIP

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7.5.01	Plan and implement community education activities and partnerships aimed at improving and sustaining immunization coverage levels	Required Activity
7.5.02	Conduct outreach and collaborative activities with American Indian tribes, if applicable	Required Activity
7.5.03	Participate in at least one collaborative meeting concerning tribal health issues, concerns, or needs with American Indian tribal members, if applicable	Required Activity
7.5.04	Coordinate educational and other activities with local Women, Infants, and Children (WIC) programs to ensure that children participating in WIC are screened and referred to their "medical home" for vaccination using a documented immunization history in accordance with the Standards for Child and Adolescent Immunization Practices	Suggested Activity
7.5.05	Offer educational opportunities to all WIC Programs in the service area, including information about online and satellite-broadcast continuing education opportunities from the CDC Continuing Education website at https://www.cdc.gov/vaccines/ed/index.html	Suggested Activity
7.5.06	Engage in education and partnerships aimed at reducing or eliminating coverage disparities by race, ethnicity, and socioeconomic status	Required Activity
7.5.07	Maintain a contact list of providers, hospitals, schools, child-care facilities, social service agencies, and community groups involved in promoting immunizations and reducing vaccine-preventable diseases	Required Activity
7.5.08	Participate in special initiatives as directed by the DSHS Immunization Unit	Required Activity
7.5.09	Implement the DSHS Immunization Ambassador Program throughout Grantee's jurisdiction	Required Activity

7.6 STAKEHOLDER ENGAGEMENT

7.6.01	Attend all Texas Immunizers and Stakeholders Working Groups (TISWG) and other designated stakeholder meetings (these meetings can be attended remotely)	Required Activity
7.6.02	Host at least 1 immunization stakeholder meeting per quarter (4 per contract year)	Suggested Activity

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7.7 MEDIA CAMPAIGNS

7.7.01	Distribute ASN information and educational materials at venues and clinics that serve eligible adults	Required Activity
7.7.02	Distribute TVFC information and educational materials at venues that parents of TVFC-eligible children might frequent	Required Activity
7.7.03	Participate, when directed, in statewide media campaigns by distributing DSHS-developed and produced public service announcements and materials to local television and radio stations, newspapers, parent publications, university newspapers, high school newspapers, and neighborhood newspapers	Required Activity
7.7.04	Promote www.ImmunizeTexas.com, the Immunization Unit's website; and any other Immunization Unit newsletters to providers in the LHD Grantee's jurisdiction	Required Activity
7.7.05	Use national immunization observances as opportunities to conduct specific education and promotional activities to give emphasis to the importance and benefits of vaccines: National Infant Immunization Week (NIIW), National Immunization Awareness Month (NIAM), and National Influenza Immunization Week (NIIW)	Required Activity
7.7.06	Share available federal, state, and/or local adolescent vaccination coverage and/or vaccine-uptake-related data with partner organizations, adolescent immunization providers, and other stakeholders	Required Activity

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DEPARTMENT OF STATE HEALTH SERVICES
CONTRACT NO. 537-18-0134-00001
AMENDMENT NO. 6
RENEWAL

The **DEPARTMENT OF STATE HEALTH SERVICES** ("**System Agency**") and **MIDLAND HEALTH AND SENIOR SERVICES** ("**Grantee**"), each a "**Party**" and collectively the "**Parties**" to that certain Public Health Emergency Preparedness ("PHEP") contract effective July 1, 2017, and denominated as System Agency Contract No. 537-18-0134-00001 (the "**Contract**"), as amended, now desire to further amend the Contract.

WHEREAS, the Parties desire to amend the Contract;

WHEREAS, the Parties desire to extend the term of the Contract in accordance with **ARTICLE III, DURATION,** of the Contract Signature Document;

WHEREAS, the Parties desire to add funds to the Contract for the period from July 1, 2022, through June 30, 2023 ("Fiscal Year 2023" or "FY2023");

WHEREAS, the Parties desire to modify the Notice to Proceed provision of the Contract;

WHEREAS, the Parties desire to revise the Statement of Work and the Uniform Terms and Conditions to the Contract;

WHEREAS, the Parties desire to incorporate **ATTACHMENT F.6, FFATA CERTIFICATION FORM,** into the Contract;

WHEREAS, the Parties desire to incorporate **ATTACHMENT G, FY23 INDIVIDUAL WORK PLAN,** into the Contract; and

WHEREAS, the Parties desire to revise **ARTICLE VI, LEGAL NOTICES**, of the Contract Signature Document.

NOW THEREFORE, the Parties hereby modify the Contract as follows:

1. **ARTICLE III**, **DURATION,** of the Contract Signature Document is amended to reflect a revised termination date of **June 30, 2023**.

2. **ARTICLE IV, BUDGET**, of the Contract Signature Document is amended to add **$105,462.00** in federal funding to the Contract with the Grantee providing a total of **$10,546.00** in match funds for FY2023. The total not-to-exceed amount of the Contract is therefore increased to **$687,724.00**, of which **$625,204.00** represents federal funding and **$62,520.00** represents match. All expenditures under the Contract will be in accordance with the revised budget set forth herein. Funds provided in support of one Contract activity may only be used for that activity and may not be comingled with other funds provided under this Contract.

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3. **ARTICLE VI**, **LEGAL NOTICES,** of the Contract Signature Document is amended to replace System Agency information with the following:

SYSTEM AGENCY
Health and Human Services Commission
Attn: Office of Chief Counsel
4601 W. Guadalupe Street, Mail Code 1100
Austin, Texas 78751

with a copy to:

Department of State Health Services
Attention: General Counsel
1100 W. 49th Street, Mail Code 1919
Austin, TX 78756

4. **ARTICLE VIII, NOTICE TO PROCEED**, of the Contract Signature Document is hereby deleted in its entirety and replaced with the following:

VIII. NOTICE TO PROCEED

Funding for this Contract is dependent on the award of the applicable federal grant. No FY2023 work may begin and no charges may be incurred until the System Agency issues a written Notice to Proceed to Grantee. This Notice to Proceed may include an amended or ratified budget which will be incorporated into this Contract by a subsequent amendment, as necessary. Notwithstanding the preceding, at the discretion of the System Agency, Grantee may be eligible to receive reimbursement for eligible expenses incurred during the period of performance as defined by 2 CFR §200.309.

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5. **ATTACHMENT B, BUDGET,** is hereby amended by deleting the budget table in its entirety and replacing it with the following:

Budget Categories	FY18 Budget Summary (7/1/17 – 6/30/18)	FY19 Budget Summary (7/1/18 – 6/30/19)	FY20 Budget Summary (7/1/19 – 6/30/20)	FY21 Budget Summary (7/1/20 – 6/30/21)	FY22 Budget Summary (7/1/21 – 6/30/22)	FY23 Budget Summary (7/1/22 – 6/30/23)	Total Budget Summary
Personnel	$40,044.00	$39,132.00	$40,200.00	$40,200.00	$40,200.00	$40,200.00	$239,976.00
Fringe Benefits	$16,818.00	$14,870.00	$15,276.00	$15,276.00	$15,276.00	$15,276.00	$92,792.00
Travel	$7,796.00	$8,620.00	$8,614.00	$8,614.00	$8,614.00	$5,187.00	$47,445.00
Equipment	$7,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$7,000.00
Supplies	$12,308.00	$20,656.00	$22,936.00	$22,936.00	$37,460.00	$37,460.00	$153,756.00
Contractual	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other	$18,224.00	$18,912.00	$17,412.00	$18,436.00	$3,912.00	$7,339.00	$84,235.00
Sum of DSHS Direct Costs	$102,190.00	$102,190.00	$104,438.00	$105,462.00	$105,462.00	$105,462.00	$625,204.00
Indirect Costs	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Sum of DSHS Direct Costs and Indirect Costs	$102,190.00	$102,190.00	$104,438.00	$105,462.00	$105,462.00	$105,462.00	$625,204.00
Plus Required Match (Cash or In-Kind)	$10,219.00	$10,219.00	$10,444.00	$10,546.00	$10,546.00	$10,546.00	$62,520.00
Total Contract Amount	**$112,409.00**	**$112,409.00**	**$114,882.00**	**$116,008.00**	**$116,008.00**	**$116,008.00**	**$687,724.00**

The Parties agree that Grantee shall provide total matching funds in the amount of **$62,520.00.**

As identified in this Contract and used herein, the term "Fiscal Year" or "FY" means the period from July 1 to June 30th of the following year, and does not identify a State or Federal Fiscal Year period, e.g. "Fiscal Year 2023" or "FY2023" means the period from July 1, 2022, through June 30, 2023.

6. **ATTACHMENT A.7, FY2023 STATEMENT OF WORK**, is attached to this Amendment and incorporated into the Contract as if fully set forth therein.

7. **ATTACHMENT C, HHSC UNIFORM TERMS AND CONDITIONS**, is deleted and replaced in its entirety with **ATTACHMENT C, HHS UNIFORM TERMS AND CONDITIONS – GRANT, VERSION 3.0.**

8. **ATTACHMENT F.6, FFATA CERTIFICATION FORM,** is attached to this Amendment and incorporated into the Contract as if fully set forth therein.

9. **ATTACHMENT G, FY23 INDIVIDUAL WORK PLAN,** is attached to this Amendment and incorporated into the Contract as if fully set forth therein.

10. This Amendment shall be effective on July 1, 2022.

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11. Except as amended by this Amendment, all terms and conditions of the Contract, as previously amended, shall remain in effect.

12. Any further revisions to the Contract shall be by written agreement of the Parties.

SIGNATURE PAGE FOLLOWS

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SIGNATURE PAGE FOR AMENDMENT NO. 6
SYSTEM AGENCY CONTRACT NO. 537-18-0134-00001

DEPARTMENT OF STATE HEALTH SERVICES	**MIDLAND HEALTH AND SENIOR SERVICES**
By: DocuSigned by: David Wolf Gruber B113A6B1CFEC4CE...	By: DocuSigned by: Whitney S. Craig, Dr.PH, MPH 83EBFB35036D49F...
Name: David Gruber	Name: Whitney S. Craig, Dr.PH, MPH
Title: Associate Commissioner for RLHS	Title: Health Services Manager
Date of Signature: March 2, 2022	Date of Signature: March 1, 2022

THE FOLLOWING ATTACHMENTS ARE ATTACHED AND INCORPORATED AS PART OF THIS CONTRACT:

ATTACHMENT A.7 - FY2023 STATEMENT OF WORK

ATTACHMENT C - HHS UNIFORM TERMS AND CONDITIONS – GRANT, VERSION 3.0

ATTACHMENT F.6 - FFATA CERTIFICATION FORM

ATTACHMENT G - FY23 INDIVIDUAL WORK PLAN

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ATTACHMENT A.7
FY2023 STATEMENT OF WORK

July 1, 2022 through June 30, 2023

For the period from July 1, 2022, through June 30, 2023 only:

I. GRANTEE RESPONSIBILITIES

Grantee will:

A. Perform activities in support of the Public Health Emergency Preparedness ("PHEP") Cooperative Agreement from the Centers for Disease Control and Prevention ("CDC") to advance public health preparedness.

B. Perform the activities required under this Contract in the following county/ies: Midland.

C. Provide System Agency with situational awareness data generated through interoperable networks of electronic data systems.

D. Address the following public health emergency preparedness capabilities:

1. Capability 1 – Community preparedness is the ability of communities to prepare for, withstand, and recover from public health incidents in both the short- and long-term.
2. Capability 2 – Community recovery is the ability of communities to identify critical assets, facilities, and other services within public health, emergency management, health care, human services, mental/behavioral health, and environmental health sectors that can guide and prioritize recovery operations.
3. Capability 3 – Emergency operations coordination is the ability to coordinate with emergency management and to direct and support an incident or event with public health or health care implications by establishing a standardized, scalable system of oversight, organization, and supervision that is consistent with jurisdictional standards and practices and the National Incident Management System ("NIMS").
4. Capability 4 – Emergency public information and warning is the ability to develop, coordinate, and disseminate information, alerts, warnings, and notifications to the public and incident management personnel.
5. Capability 5 – Fatality management is the ability to coordinate with partner organizations and agencies to provide fatality management services to ensure the proper recovery and preservation of remains; identification of the deceased; determination of cause and manner of death; release of remains to an authorized individual; and provision of mental/behavioral health assistance for the grieving. The role also may include supporting activities for the identification, collection, documentation, retrieval, and transportation of human remains, personal effects, and evidence to the examination location or incident morgue.
6. Capability 6 – Information sharing is the ability to conduct multijurisdictional and multidisciplinary exchange of health-related information and situational awareness data

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among federal, state, local, tribal, and territorial levels of government and the private sector. This capability includes the routine sharing of information as well as issuing of public health alerts to all levels of government and the private sector in preparation for and in response to events or incidents of public health significance.

7. Capability 7 – Mass care is the ability of public health agencies to coordinate with and support partner agencies to address, within a congregate location (excluding shelter-in-place locations), the public health, health care, mental/behavioral health, and human services needs of those impacted by an incident. This capability includes coordinating ongoing surveillance and public health assessments to ensure that health needs continue to be met as the incident evolves.
8. Capability 8 – Medical countermeasure dispensing and administration is the ability to provide medical countermeasures to targeted population(s) to prevent, mitigate, or treat the adverse health effects of a public health incident, according to public health guidelines. This capability focuses on dispensing and administering medical countermeasures, such as vaccines, antiviral drugs, antibiotics, and antitoxins.
9. Capability 9 – Medical materiel management and distribution is the ability to acquire, manage, transport, and track medical materiel during a public health incident or event and the ability to recover and account for unused medical materiel, such as pharmaceuticals, vaccines, gloves, masks, ventilators, or medical equipment after an incident.
10. Capability 10 – Medical surge is the ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community. It encompasses the ability of the health care system to endure a hazard impact, maintain or rapidly recover operations that were compromised, and support the delivery of medical care and associated public health services, including disease surveillance, epidemiological inquiry, laboratory diagnostic services, and environmental health assessments.
11. Capability 11 – Nonpharmaceutical interventions are actions that people and communities can take to help slow the spread of illness or reduce the adverse impact of public health emergencies. This capability focuses on communities, community partners, and stakeholders recommending and implementing nonpharmaceutical interventions in response to the needs of an incident, event, or threat. Nonpharmaceutical interventions may include isolation; quarantine; restrictions on movement and travel advisories or warnings; social distancing; external decontamination; hygiene; and precautionary protective behaviors.
12. Capability 12 – Public health laboratory testing is the ability to implement and perform methods to detect, characterize, and confirm public health threats. It also includes the ability to report timely data, provide investigative support, and use partnerships to address actual or potential exposure to threat agents in multiple matrices, including clinical specimens and food, water, and other environmental samples. This capability supports passive and active surveillance when preparing for, responding to, and recovering from biological, chemical, and radiological (if a Radiological Laboratory Response Network is

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established) public health threats and emergencies.

13. Capability 13 – Public health surveillance and epidemiological investigation is the ability to create, maintain, support, and strengthen routine surveillance and detection systems and epidemiological investigation processes. It also includes the ability to expand these systems and processes in response to incidents of public health significance.
14. Capability 14 – Responder safety and health is the ability to protect public health and other emergency responders during pre-deployment, deployment, and post-deployment.
15. Capability 15 – Volunteer management is the ability to coordinate with emergency management and partner agencies to identify, recruit, register, verify, train, and engage volunteers to support the jurisdictional public health agency's preparedness, response, and recovery activities during pre-deployment, deployment, and post-deployment.

E. Match funds awarded under this Contract with costs or third-party contributions that are not paid by the federal government under another award, except where authorized by federal statute to be used for cost-sharing or matching. The non-federal contributions (match) may be provided directly or through donations from public or private entities and may be in cash or in-kind donations, fairly evaluated, including plant, equipment, or services. The costs that the Grantee incurs in fulfilling the matching or cost-sharing requirement are subject to the same requirements, including the cost principles, that are applicable to the use of federal funds, including prior approval requirements and other rules for allowable costs as described in 45 CFR 74.23 and 45 CFR 92.24, as amended.

Grantee will provide matching funds in the amount of ten percent (10%) of the Contract amount as set forth in **ATTACHMENT B**, **BUDGET**. Cash match is defined as an expenditure of cash by the Grantee on allowable costs of this Contract that are borne by the Grantee. In-kind match is defined as the dollar value of non-cash contributions by a third party given in goods, commodities, or services that are used in activities that benefit this Contract's project and that are contributed by non-federal third parties without charge to the Grantee. The criteria for match must:

1. Be an allowable cost under the applicable federal cost principle;
2. Be necessary and reasonable for the efficient accomplishment of project or program objectives;
3. Be verifiable within the Grantee's (or subgrantee's) records;
4. Be documented, including methods and sources, in the approved budget (applies only to cost reimbursement contracts);
5. Not be included as contributions toward any other federally-assisted project or program (match can count only once);
6. Not be paid by the federal government under another award, except where authorized by federal statute to be used for cost-sharing or match;
7. Conform to other provisions of governing circulars/statutes/regulations as applicable

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for the Contract;
8. Be adequately documented;
9. Follow procedures for generally accepted accounting practices as well as meet audit requirements; and
10. Value the in-kind contributions reported and be supported by documentation reflecting the use of goods and/or services during the Contract term.

F. In the event of a local, state, or federal emergency, the Grantee has the authority to utilize approximately five percent (5%) of the Grantee's staff's time supporting this Contract for response efforts. System Agency will reimburse Grantee up to five percent of this Contract funded by the CDC for personnel costs responding to an emergency event. Grantee will maintain records to document the time spent on response efforts for auditing purposes. Allowable activities also include participation in drills and exercises in the pre-event time period. Grantee will notify the System Agency Contract Manager in writing when this provision is implemented.

G. In the event of a public health emergency involving a portion of the state, mobilize and dispatch staff or equipment purchased with funds from previous PHEP cooperative agreements, and not currently performing critical duties in the jurisdiction served, to the affected area of the state upon receipt of a written request from System Agency.

H. Coordinate activities and response plans within the jurisdiction with the state, regional, and other local jurisdictions, among local agencies, and with hospitals and major health care entities, jurisdictional Metropolitan Medical Response Systems, and Councils of Government.

I. Inform System Agency in writing if Grantee will not continue performance under this Contract within thirty (30) days of receipt of an amended standard(s) or guideline(s). System Agency may terminate this Contract immediately or within a reasonable period of time as determined by System Agency.

J. Develop, implement, and maintain a timekeeping system for accurately documenting staff time and salary expenditures for all staff funded through this Contract, including partial full-time employees and temporary staff.

K. Complete and submit programmatic reports as directed by System Agency in a format specified by System Agency and as needed to satisfy information-sharing requirements set forth in Texas Government Code, Sections 421.071 and 421.072 (b) and (c), as amended. Grantee will provide System Agency other reports, including financial reports, that System Agency determines necessary to accomplish the objectives of this Contract and to monitor compliance.

L. Submit the Vulnerable Populations Plan that encompasses the Contract term to the System

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Agency to the Department of State Health Services ("DSHS") Center for Health Emergency Preparedness and Response ("CHEPR") within an established timeframe and submission method designated by the Contractual Requirements Schedule. The Work Plan, referred to in this Contract as **ATTACHMENT G, WORK PLAN**, was submitted to DSHS with the Budget Packet. Any revisions to the Work Plan require written approval by DSHS.

M. Submit a current Integrated Preparedness Plan ("IPP"; formerly the Multi-Year Training and Exercise Plan ["MYTEP"]), which must include at least four years of progressive exercise planning, to the System Agency within an established timeframe and submission method designated by the Contractual Requirements Schedule, using the template provided by System Agency.

N. Submit at least one After Action Review/Improvement Plan ("AAR/IP"). All AAR/IPs must be submitted to the System Agency within 60 calendar days, or 90 calendar days for Real World Incident ("RWI"), of the completion of the exercise/response within an established timeframe and submission method designated by the Contractual Requirements Schedule. AAR/IPs must be completed in accordance with Notification and Reporting of Exercise Grant.

O. Complete and submit the Expanded Operational Readiness Review ("ORR") to CDC and upload supporting documentation to the System Agency via the DSHS CHEPR External SharePoint site by April 1, 2023. Documentation is required within an established timeframe designated by the Contractual Requirements Schedule.

P. Submit the End-of-Year Performance Report to the System Agency within an established timeframe and submission method designated by the Contractual Requirements Schedule.

Q. Designate a member of the PHEP program to attend two regional healthcare coalition meetings during the Contract term, if meetings resume during the Contract term. Submit evidence of attendance, within an established timeframe designated by the Contractual Requirements Schedule.

R. Immediately notify System Agency in writing if Grantee is legally prohibited from providing any report under this Contract.

S. Have plans, processes, and training in place to meet NIMS compliance requirements.

T. When using volunteers during the Contract term, the Grantee must designate a Texas Disaster Volunteer Registry ("TDVR") State Emergency System for the Advanced Registration of Volunteer Health Professionals ("ESAR-VHP") System Administrator, participate in required administrator trainings, and utilize the system to identify volunteers.

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U. Grantee may not use funds for research, clinical care, fund-raising activities or lobbying, construction or major renovations, reimbursement of pre-award costs, to supplant existing state or federal funds for activities, payment or reimbursement of backfilling costs for staff, purchase of vehicles of any kind, uniforms or furniture, or funding an award to another party or provider who is ineligible.

V. None of the funds made available under this agreement may be used to promote or advocate the legalization or practice of prostitution or sex trafficking. Nothing in the preceding sentence shall be construed to preclude the provision to individuals of palliative care, treatment, or post-exposure pharmaceutical prophylaxis, and necessary pharmaceuticals and commodities, including test kits, condoms, and, when proven effective, microbicides.

W. Cooperate with System Agency to coordinate all planning, training and exercises performed under this Contract with the Texas Division of Emergency Management ("TDEM"), or other points of contact at the discretion of the Division for Regional and Local Health Operations, to ensure consistency and coordination of requirements at the local level and eliminate duplication of effort between the various domestic preparedness funding sources in the state.

X. Coordinate all risk communication activities with the System Agency Communications Unit by using System Agency's core messages posted on the System Agency website and submitting copies of draft risk communication materials to System Agency for coordination prior to dissemination.

Y. Initiate the purchase of all equipment approved in writing by the System Agency in the first quarter of the Contract term, as applicable. Failure to timely initiate the purchase of equipment may result in the loss of availability of funds for the purchase of equipment. Requests to purchase previously approved equipment after the first quarter in the Contract must be submitted to the assigned System Agency Contract Manager.

Z. Maintain an inventory of equipment, supplies defined as Controlled Assets, and real property. Grantee shall submit an annual cumulative report of the equipment and other property on HHS System Agency Grantee's Property Inventory Report to the assigned System Agency Contract Manager by email not later than October 15 of each year. Controlled Assets include firearms, regardless of the acquisition cost, and the following assets with an acquisition cost of $500 or more, but less than $5,000: desktop and laptop computers (including notebooks, tablets and similar devices), non-portable printers and copiers, emergency management equipment, communication devices and systems, medical and laboratory equipment, and media equipment. Controlled Assets are considered Supplies.

AA. Provide notification of budget transfers by submission of a revised Categorical Budget Form to the System Agency Contract Manager, highlighting the areas affected by the budget

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transfer.

Transferring funds between budget categories, other than the equipment and indirect cost categories, is allowable, but cannot exceed 25% of the total Contract value during a Contract budget period. If the budget transfer(s) exceeds 25% of the total Contract value, alone or cumulatively, a formal Contract amendment is required.

After review, the System Agency Contract Manager shall provide notification of acceptance to Grantee via email, upon receipt of which, the revised budget shall be incorporated into the Contract.

BB. Not use System Agency funds to purchase buildings or real property without prior written approval from the System Agency. Any costs related to the initial acquisition of the buildings or real property are not allowable without written pre-approval.

CC. At the expiration or termination of this Contract for any reason, title to any remaining equipment and supplies purchased with funds under this Contract reverts to System Agency. Title may be transferred to any other party designated by System Agency. The System Agency may, at its option and to the extent allowed by law, transfer the reversionary interest to such property to Grantee.

DD. Comply with all applicable federal and state laws, rules, and regulations, as amended, including, but not limited to, the following:

1. Public Law 109-417, Pandemic and All-Hazards Preparedness and Advancing Innovation Act ("PAHPAI");
2. Texas Health and Safety Code Chapter 81; and
3. Section 319C-1 of the Public Health Service (PHS) Act (47 USC § 247d-3a), as amended.

EE. Comply with all applicable regulations, standards and guidelines in effect on the beginning date of the term of this Contract.

FF. Submit other reports as required by System Agency. The initial reporting schedule for the requirements is subject to change as System Agency and CDC may modify requirements and due dates.

GG. Work with the Regional Health Care Coalition to develop comprehensive preparedness strategies. Plans will be submitted to System Agency by the Health Care Coalition.

II. PERFORMANCE MEASURES

A. The System Agency will monitor the Grantee's performance of the requirements in this

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Attachment and compliance with the Contract's terms and conditions.

B. Grantee will meet and report Performance Measures based on requirements that are developed in coordination with System Agency for the Grantee's project as provided in Section I. Grantee must also demonstrate adherence to PHEP reporting deadlines and the capability to receive, stage, store, distribute, and dispense materiel during a public health emergency. Failure to meet these requirements may result in withholding a portion of the current fiscal year PHEP base award.

C. System Agency will send a Contractual Requirements Schedule for reporting these Performance Measures within thirty (30) days of this Amendment No. 6 effective date.

III. INVOICE AND PAYMENT

A. Grantee will request payment using the State of Texas Purchase Voucher (Form B-13) monthly and acceptable supporting documentation for reimbursement of the required services/deliverables. The Grantee will submit the Financial Status Report (FSR-269A). Additionally, the Grantee will submit the Match Certification Form (B-13A), at the end of the fourth quarter. Vouchers, supporting documentation, Financial Status Reports, and Match Certification Forms should be mailed or emailed to the addresses below.

Department of State Health Services
Claims Processing Unit, MC 1940
1100 West 49th Street
P.O. Box 149347
Austin, TX 78714-9347
FAX: (512) 458-7442
EMAIL: invoices@dshs.texas.gov & CMSInvoices@dshs.texas.gov

B-13s and supporting documentation should be sent to: invoices@dshs.texas.gov & CMSInvoices@dshs.texas.gov & cc System Agency Contract Manager.

FSRs should be sent to: FSRGrants@dshs.texas.gov & CMSInvoices@dshs.texas.gov & cc System Agency Contract Manager.

B. Grantee will be reimbursed on a monthly basis and in accordance with **ATTACHMENT B, BUDGET** of the Contract.

C. System Agency reserves the right, where allowed by legal authority, to redirect funds in the event of financial shortfalls. System Agency will monitor Grantee's expenditures on a quarterly basis. If expenditures are below that projected in Grantee's total Contract amount,

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Grantee's budget may be subject to a decrease for the remainder of the Contract term. Vacant positions existing after ninety (90) days may result in a decrease in funds.

D. Grantee may request a one-time working capital advance not to exceed twelve percent (12%) of the total amount of the Contract funded by System Agency. All advances must be expended by the end of the Contract term. Advances not expended by the end of the Contract term must be refunded to System Agency. Grantee will repay all or part of advance funds at any time during the Contract's term. However, if the advance has not been repaid prior to the last three months of the Contract term, the Grantee must deduct at least one-third of the remaining advance from each of the last three months' reimbursement requests. If the advance is not repaid prior to the last three months of the Contract term, System Agency will reduce the reimbursement request by one-third of the remaining balance of the advance.

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Health and Human Services (HHS)

Uniform Terms and Conditions - Grant

Version 3.0

Published and Effective – August 2021

Responsible Office: Chief Counsel

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ABOUT THIS DOCUMENT

In this document, Grantees (also referred to in this document as subrecipients or contractors) will find requirements and conditions applicable to grant funds administered and passed-through by both the Texas Health and Human Services Commission (HHSC) and the Department of State Health Services (DSHS). These requirements and conditions are incorporated into the Grant Agreement through acceptance by Grantee of any funding award by HHSC or DSHS.

The terms and conditions in this document are in addition to all requirements listed in the RFA, if any, under which applications for this grant award are accepted, as well as all applicable federal and state laws and regulations. Applicable federal and state laws and regulations may include, but are not limited to: 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards; requirements of the entity that awarded the funds to HHS; Chapter 783 of the Texas Government Code; Texas Comptroller of Public Accounts' agency rules (including Uniform Grant and Contract Standards set forth in Title 34, Part 1, Chapter 20, Subchapter E, Division 4 of the Texas Administrative Code); the Texas Grant Management Standards (TxGMS) developed by the Texas Comptroller of Public Accounts; and the Funding Announcement, Solicitation, or other instrument/documentation under which HHS was awarded funds. HHS, in its sole discretion, reserves the right to add requirements, terms, or conditions.

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ARTICLE I. DEFINITIONS AND INTERPRETIVE PROVISIONS

1.1 DEFINITIONS

As used in this Grant Agreement, unless a different definition is specified, or the context clearly indicates otherwise, the following terms and conditions have the meanings assigned below:

"Amendment" means a written agreement, signed by the Parties, which documents changes to the Grant Agreement.

"Contract" or "Grant Agreement" means the agreement entered into by the Parties, including the Signature Document, these Uniform Terms and Conditions, along with any attachments and amendments that may be issued by the System Agency.

"Deliverables" means the goods, services, and work product, including all reports and project documentation, required to be provided by Grantee to the System Agency.

"DSHS" means the Department of State Health Services.

"Effective Date" means the date on which the Grant Agreement takes effect.

"Federal Fiscal Year" means the period beginning October 1 and ending September 30 each year, which is the annual accounting period for the United States government.

"GAAP" means Generally Accepted Accounting Principles.

"GASB" means the Governmental Accounting Standards Board.

"Grantee" means the Party receiving funds under this Grant Agreement. May also be referred to as "subrecipient" or "contractor" in this document.

"HHSC" means the Texas Health and Human Services Commission.

"Health and Human Services" or "HHS" includes HHSC and DSHS.

"Intellectual Property Rights" means the worldwide proprietary rights or interests, including patent, copyright, trade secret, and trademark rights, as such right may be evidenced by or embodied in:

i. any idea, design, concept, personality right, method, process, technique, apparatus, invention, discovery, or improvement;
ii. any work of authorship, including any compilation, computer code, website or web page design, literary work, pictorial work, or graphic work;
iii. any trademark, service mark, trade dress, trade name, branding, or other indicia of source or origin;
iv. domain name registrations; and
v. any other proprietary or similar rights. The Intellectual Property Rights of a Party include all worldwide proprietary rights or interests that the Party may have acquired by assignment, by exclusive license, or by license with the right to grant sublicenses.

"Parties" means the System Agency and Grantee, collectively.

"Party" means either the System Agency or Grantee, individually.

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"Project" means specific activities of the Grantee that are supported by funds provided under this Grant Agreement.

"Signature Document" means the document executed by all Parties for this Grant Agreement.

"Solicitation," "Funding Announcement" or "Request for Applications (RFA)" means the document (including all exhibits, attachments, and published addenda), issued by the System Agency under which applications for grant funds were requested, which is incorporated by reference in the Grant Agreement for all purposes in its entirety.

"Solicitation Response" or "Application" means Grantee's full and complete Solicitation response (including any attachments and addenda), which is incorporated by reference in the Grant Agreement for all purposes in its entirety.

"State Fiscal Year" means the period beginning September 1 and ending August 31 each year, which is the annual accounting period for the State of Texas.

"State of Texas *Textravel*" means the Texas Comptroller of Public Accounts' state travel rules, policies, and guidelines.

"Statement of Work" means the description of activities Grantee must perform to complete the Project, as specified in the Grant Agreement and as may be amended.

"System Agency" means HHSC or DSHS, as applicable.

"Work Product" means any and all works, including work papers, notes, materials, approaches, designs, specifications, systems, innovations, improvements, inventions, software, programs, source code, documentation, training materials, audio or audiovisual recordings, methodologies, concepts, studies, reports, whether finished or unfinished, and whether or not included in the deliverables, that are developed, produced, generated or provided by Grantee in connection with Grantee's performance of its duties under the Grant Agreement or through use of any funding provided under this Grant Agreement.

"Texas Grant Management Standards" or "TxGMS" means uniform grant and contract administration procedures, developed under the authority of Chapter 783 of the Texas Government Code, to promote the efficient use of public funds in local government and in programs requiring cooperation among local, state, and federal agencies. Under this Grant Agreement, TxGMS applies to Grantee except as otherwise provided by applicable law or directed by System Agency. Additionally, except as otherwise provided by applicable law, in the event of a conflict between TxGMS and applicable federal or state law, federal law prevails over state law and state law prevails over TxGMS.

1.2 INTERPRETIVE PROVISIONS

A. The meanings of defined terms include the singular and plural forms.
B. The words "hereof," "herein," "hereunder," and similar words refer to this Grant Agreement as a whole and not to any particular provision, section, attachment, or schedule of this Grant Agreement unless otherwise specified.
C. The term "including" is not limiting and means "including without limitation" and, unless otherwise expressly provided in this Grant Agreement, (i) references to contracts

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(including this Grant Agreement) and other contractual instruments shall be deemed to include all subsequent Amendments and other modifications, but only to the extent that such Amendments and other modifications are not prohibited by the terms of this Grant Agreement, and (ii) references to any statute or regulation are to be construed as including all statutory and regulatory provisions consolidating, amending, replacing, supplementing, or interpreting the statute or regulation.

D. Any references to agreements, contracts, statutes, or administrative rules or regulations in the Grant Agreement are references to these documents as amended, modified, or supplemented during the term of the Grant Agreement.
E. The captions and headings of this Grant Agreement are for convenience of reference only and do not affect the interpretation of this Grant Agreement.
F. All attachments, including those incorporated by reference, and any Amendments are considered part of the terms of this Grant Agreement.
G. This Grant Agreement may use several different limitations, regulations, or policies to regulate the same or similar matters. All such limitations, regulations, and policies are cumulative.
H. Unless otherwise expressly provided, reference to any action of the System Agency or by the System Agency by way of consent, approval, or waiver will be deemed modified by the phrase "in its sole discretion."
I. Time is of the essence in this Grant Agreement.
J. Prior to execution of the Grant Agreement, Grantee must notify System Agency's designated contact in writing of any ambiguity, conflict, discrepancy, omission, or other error. If Grantee fails to notify the System Agency designated contact of any ambiguity, conflict, discrepancy, omission or other error in the Grant Agreement prior to Grantee's execution of the Grant Agreement, Grantee:
    i. Shall have waived any claim of error or ambiguity in the Grant Agreement; and
    ii. Shall not contest the interpretation by the System Agency of such provision(s).

No grantee will be entitled to additional reimbursement, relief, or time by reason of any ambiguity, conflict, discrepancy, exclusionary specification, omission, or other error or its later correction.

ARTICLE II. PAYMENT PROVISIONS

2.1 PROMPT PAYMENT

Payment shall be made in accordance with Chapter 2251 of the Texas Government Code, commonly known as the Texas Prompt Payment Act. Chapter 2251 of the Texas Government Code shall govern remittance of payment and remedies for late payment and non-payment.

2.2 TAXES

Grantee represents and warrants that it shall pay all taxes or similar amounts resulting from the Grant Agreement, including, but not limited to, any federal, State, or local income, sales or excise taxes of Grantee or its employees. System Agency shall not be liable for any taxes resulting from the Grant Agreement.

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2.3 ANCILLARY AND TRAVEL EXPENSES

A. Except as otherwise provided in the Grant Agreement, no ancillary expenses incurred by the Grantee in connection with its provision of the services or deliverables will be reimbursed by the System Agency. Ancillary expenses include, but are not limited to, costs associated with transportation, delivery, and insurance for each deliverable.

B. Except as otherwise provided in the Grant Agreement, when the reimbursement of travel expenses is authorized by the Grant Agreement, all such expenses will be reimbursed in accordance with the rates set by the Texas Comptroller's *Textravel* guidelines, which can currently be accessed at: https://fmx.cpa.texas.gov/fmx/travel/textravel/.

2.4 BILLING

Unless otherwise provided in the Grant Agreement, Grantee shall bill the System Agency in accordance with the Grant Agreement. Unless otherwise specified in the Grant Agreement, Grantee shall submit requests for reimbursement or payment monthly by the last business day of the month following the month in which expenses were incurred or services provided. Grantee shall maintain all documentation that substantiates invoices and make the documentation available to the System Agency upon request.

2.5 USE OF FUNDS

Grantee shall expend funds under this Grant Agreement only for approved services and for reasonable and allowable expenses directly related to those services.

2.6 USE FOR MATCH PROHIBITED

Grantee shall not use funds provided under this Grant Agreement for matching purposes in securing other funding without the written approval of the System Agency.

2.7 PROGRAM INCOME

Program income refers to gross income directly generated by a supporting activity during the period of performance. Unless otherwise required under the Grant Agreement, Grantee shall use Program Income, as provided in TxGMS, to further the Project, and Grantee shall spend the Program Income on the Project. Grantee shall identify and report Program Income in accordance with the Grant Agreement, applicable law, and any programmatic guidance. Grantee shall expend Program Income during the Grant Agreement term, when earned, and may not carry Program Income forward to any succeeding term. Grantee shall refund Program Income to the System Agency if the Program Income is not expended in the term in which it is earned. The System Agency may base future funding levels, in part, upon Grantee's proficiency in identifying, billing, collecting, and reporting Program Income, and in using Program Income for the purposes and under the conditions specified in this Grant Agreement.

2.8 NONSUPPLANTING

Grant funds must be used to supplement existing, new or corresponding programming and related activities. Grant funds may not be used to supplant (replace) existing funds that have been appropriated, allocated, or disbursed for the same purpose. System Agency may conduct Grant monitoring or audits may be conducted to review, among other things, Grantee's compliance with this provision.

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2.9 INDIRECT COST RATES

The System Agency may acknowledge an indirect cost rate for Grantees that is utilized for all applicable Grant Agreements. For subrecipients receiving federal funds, indirect cost rates will be determined in accordance with applicable law including, but not limited to, 2 CFR 200.414(f). For recipients receiving state funds, indirect costs will be determined in accordance with applicable law including, but not limited to, TxGMS. Grantees funded with blended federal and state funding will be subject to both state and federal requirements when determining indirect costs. In the event of a conflict between TxGMS and applicable federal law or regulation, the provisions of federal law or regulation will apply. Grantee will provide any necessary financial documents to determine the indirect cost rate in accordance with the Uniform Grant Guidance (UGG) and TxGMS.

ARTICLE III. STATE AND FEDERAL FUNDING

3.1 EXCESS OBLIGATIONS PROHIBITED

This Grant Agreement is subject to termination or cancellation, without penalty to System Agency, either in whole or in part, subject to the availability and actual receipt by System Agency of state or federal funds. System Agency is a state agency whose authority and appropriations are subject to actions of the Texas Legislature. If System Agency becomes subject to a legislative change, revocation of statutory authority, or lack of appropriated funds that would render either System Agency's or Grantee's delivery or performance under the Grant Agreement impossible or unnecessary, the Grant Agreement will be terminated or cancelled and be deemed null and void. In the event of a termination or cancellation under this Section, System Agency will not be liable to Grantee for any damages that are caused or associated with such termination or cancellation, and System Agency will not be required to give prior notice. Additionally, System Agency will not be liable to Grantee for any remaining unpaid funds under this Grant Agreement at time of termination.

3.2 NO DEBT AGAINST THE STATE

This Grant Agreement will not be construed as creating any debt by or on behalf of the State of Texas.

3.3 DEBTS AND DELINQUENCIES

Grantee agrees that any payments due under the Grant Agreement shall be directly applied towards eliminating any debt or delinquency it has to the State of Texas including, but not limited to, delinquent taxes, delinquent student loan payments, and delinquent child support during the entirety of the Grant Agreement term.

3.4 REFUNDS AND OVERPAYMENTS

A. At its sole discretion, the System Agency may (i) withhold all or part of any payments to Grantee to offset overpayments, unallowable or ineligible costs made to the Grantee, or if any required financial status report(s) is not submitted by the due date(s); or (ii) require Grantee to promptly refund or credit - within thirty (30) calendar days of written notice – to System Agency any funds erroneously paid by System Agency which are not expressly authorized under the Grant Agreement.

B. "Overpayments" as used in this Section include payments (i) made by the System

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Agency that exceed the maximum allowable rates; (ii) that are not allowed under applicable laws, rules, or regulations; or (iii) that are otherwise inconsistent with this Grant Agreement, including any unapproved expenditures. Grantee understands and agrees that it shall be liable to the System Agency for any costs disallowed pursuant to financial and compliance audit(s) of funds received under this Grant Agreement. Grantee further understands and agrees that reimbursement of such disallowed costs shall be paid by Grantee from funds which were not provided or otherwise made available to Grantee under this Grant Agreement.

ARTICLE IV. ALLOWABLE COSTS AND AUDIT REQUIREMENTS

4.1 ALLOWABLE COSTS

A. Allowable Costs are restricted to costs that are authorized under Texas Uniform Grant Management Standards (TxGMS) and applicable state and federal rules and laws. This Grant Agreement is subject to all applicable requirements of TxGMS, including the criteria for Allowable Costs. Additional federal requirements apply if this Grant Agreement is funded, in whole or in part, with federal funds.

B. System Agency will reimburse Grantee for actual, allowable, and allocable costs incurred by Grantee in performing the Project, provided the costs are sufficiently documented. Grantee must have incurred a cost prior to claiming reimbursement and within the applicable term to be eligible for reimbursement under this Grant Agreement. At its sole discretion, the System Agency will determine whether costs submitted by Grantee are allowable and eligible for reimbursement. The System Agency may take repayment (recoup) from remaining funds available under this Grant Agreement in amounts necessary to fulfill Grantee's repayment obligations. Grantee and all payments received by Grantee under this Grant Agreement are subject to applicable cost principles, audit requirements, and administrative requirements including applicable provisions under 2 CFR 200, 48 CFR Part 31, and TxGMS.

C. OMB Circulars will be applied with the modifications prescribed by TxGMS with effect given to whichever provision imposes the more stringent requirement in the event of a conflict.

4.2 AUDITS AND FINANCIAL STATEMENTS

A. Audits

i. Grantee understands and agrees that Grantee is subject to any and all applicable audit requirements found in state or federal law or regulation or added by this Grant Agreement

ii. HHS Single Audit Unit will notify Grantee to complete the Single Audit Determination Form. If Grantee fails to complete the form within thirty (30) calendar days after receipt of notice, Grantee maybe subject to sanctions and remedies for non-compliance.

iii. If Grantee, within Grantee's fiscal year, expends at least SEVEN HUNDRED FIFTY THOUSAND DOLLARS ($750,000) in federal funds awarded, Grantee shall have a single audit or program-specific audit in accordance with 2 CFR 200. The federal threshold amount includes federal funds passed through by way of state agency awards.

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iv. If Grantee, within Grantee's fiscal year, expends at least SEVEN HUNDRED FIFTY THOUSAND DOLLARS ($750,000) in state funds awarded, Grantee shall have a single audit or program-specific audit in accordance with TxGMS. The audit must be conducted by an independent certified public accountant and in accordance with 2 CFR 200, Government Auditing Standards, and TxGMS.

v. For-profit Grantees whose expenditures meet or exceed the federal or state expenditure thresholds stated above shall follow the guidelines in 2 CFR 200 or TxGMS, as applicable, for their program-specific audits.

vi. Each Grantee required to obtain a single audit must competitively re-procure single audit services once every six years. Grantee shall procure audit services in compliance with this section, state procurement procedures, as well as with applicable provisions of 2 CFR 200 and TxGMS.

B. Financial Statements.

Each Grantee that does not meet the expenditure threshold for a single audit or program-specific audit, must provide financial statements for the audit period.

4.3 SUBMISSION OF AUDITS AND FINANCIAL STATEMENTS

A. Audits.

Due the earlier of 30 days after receipt of the independent certified public accountant's report or nine months after the end of the fiscal year, Grantee shall submit one electronic copy of the single audit or program-specific audit to the System Agency via:

i. HHS portal at https://hhsportal.hhs.state.tx.us/heartwebextr/hhscSau or,

ii. Email to: single_audit_report@hhsc.state.tx.us.

B. Financial Statements.

Due no later than nine months after the Grantee's fiscal year-end, Grantees not required to submit an audit, shall submit one electronic copy of their financial statements via:

i. HHS portal at https://hhsportal.hhs.state.tx.us/heartwebextr/hhscSau; or,

ii. Email to: single_audit_report@hhsc.state.tx.us.

ARTICLE V. WARRANTY, AFFIRMATIONS, ASSURANCES AND CERTIFICATIONS

5.1 WARRANTY

Grantee warrants that all work under this Grant Agreement shall be completed in a manner consistent with standards under the terms of this Grant Agreement, in the applicable trade, profession, or industry; shall conform to or exceed the specifications set forth in the Grant Agreement; and all deliverables shall be fit for ordinary use, of good quality, and with no material defects. If System Agency, in its sole discretion, determines Grantee has failed to complete work timely or to perform satisfactorily under conditions required by this Grant Agreement, the System Agency may require Grantee, at its sole expense, to:

i. Repair or replace all defective or damaged work;

ii. Refund any payment Grantee received from System Agency for all defective or damaged work and, in conjunction therewith, require Grantee to accept the return of such work; and,

iii. Take necessary action to ensure that Grantee's future performance and work conform to the Grant Agreement requirements.

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5.2 General Affirmations

Grantee certifies that, to the extent affirmations are incorporated into the Grant Agreement, the Grantee has reviewed the affirmations and that Grantee is in compliance with all requirements.

5.3 Federal Assurances

Grantee further certifies that, to the extent federal assurances are incorporated into the Grant Agreement, the Grantee has reviewed the federal assurances and that Grantee is in compliance with all requirements.

5.4 Federal Certifications

Grantee further certifies that, to the extent federal certifications are incorporated into the Grant Agreement, the Grantee has reviewed the federal certifications and that Grantee is in compliance with all requirements. In addition, Grantee certifies that it is in compliance with all applicable federal laws, rules, and regulations, as they may pertain to this Grant Agreement.

5.5 State Assurances

Except to the extent of any conflict under applicable law or requirements or guidelines of any federal awarding agency from which funding for this Grant Agreement originated, the Grantee must comply with the applicable state assurances included within the TxGMS which are incorporated here by reference.

ARTICLE VI. INTELLECTUAL PROPERTY

6.1 Ownership of Work Product

A. All right, title, and interest in the Work Product, including all Intellectual Property Rights therein, is exclusively owned by System Agency. Grantee and Grantee's employees will have no rights in or ownership of the Work Product or any other property of System Agency.
B. Any and all Work Product that is copyrightable under United States copyright law is deemed to be "work made for hire" owned by System Agency, as provided by Title 17 of the United States Code. To the extent that Work Product does not qualify as a "work made for hire" under applicable federal law, Grantee hereby irrevocably assigns and transfers to System Agency, its successors and assigns, the entire right, title, and interest in and to the Work Product, including any and all Intellectual Property Rights embodied therein or associated therewith, and in and to all works based upon, derived from, or incorporating the Work Product, and in and to all income, royalties, damages, claims and payments now or hereafter due or payable with respect thereto, and in and to all causes of action, either in law or in equity for past, present or future infringement based on the copyrights, and in and to all rights corresponding to the foregoing.
C. Grantee agrees to execute all papers and to perform such other acts as System Agency may deem necessary to secure for System Agency or its designee the rights herein assigned.
D. In the event that Grantee has any rights in and to the Work Product that cannot be assigned to System Agency, Grantee hereby grants to System Agency an exclusive, worldwide, royalty-free, transferable, irrevocable, and perpetual license, with the right to

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sublicense, to reproduce, distribute, modify, create derivative works of, publicly perform and publicly display, make, have made, use, sell and offer for sale the Work Product and any products developed by practicing such rights.

E. The foregoing does not apply to Incorporated Pre-existing Works or Third Party IP that are incorporated in the Work Product by Grantee. Grantee shall provide System Agency access during normal business hours to all Grantee materials, premises, and computer files containing the Work Product.

6.2 GRANTEE'S PRE-EXISTING WORKS

A. To the extent that Grantee incorporates into the Work Product any works of Grantee that were created by Grantee or that Grantee acquired rights in prior to the Effective Date of this Grant Agreement ("**Incorporated Pre-existing Works**"), Grantee retains ownership of such Incorporated Pre-existing Works.

B. Grantee hereby grants to System Agency an irrevocable, perpetual, non-exclusive, royalty-free, transferable, worldwide right and license, with the right to sublicense, to use, reproduce, modify, copy, create derivative works of, publish, publicly perform and display, sell, offer to sell, make and have made, the Incorporated Pre-existing Works, in any medium, with or without the associated Work Product.

C. Grantee represents, warrants, and covenants to System Agency that Grantee has all necessary right and authority to grant the foregoing license in the Incorporated Pre-existing Works to System Agency.

6.3 THIRD PARTY IP

A. To the extent that any Third Party IP is included or incorporated in the Work Product by Grantee, Grantee hereby grants to System Agency, or shall obtain from the applicable third party for System Agency's benefit, the irrevocable, perpetual, non-exclusive, worldwide, royalty-free right and license, for System Agency's internal business or governmental purposes only, to use, reproduce, display, perform, distribute copies of, and prepare derivative works based upon such Third Party IP and any derivative works thereof embodied in or delivered to System Agency in conjunction with the Work Product, and to authorize others to do any or all of the foregoing.

B. Grantee shall obtain System Agency's advance written approval prior to incorporating any Third Party IP into the Work Product, and Grantee shall notify System Agency on delivery of the Work Product if such materials include any Third Party IP.

C. Grantee shall provide System Agency all supporting documentation demonstrating Grantee's compliance with this Section 6.3, including without limitation documentation indicating a third party's written approval for Grantee to use any Third Party IP that may be incorporated in the Work Product.

6.4 AGREEMENTS WITH EMPLOYEES AND SUBCONTRACTORS

Grantee shall have written, binding agreements with its employees and subcontractors that include provisions sufficient to give effect to and enable Grantee's compliance with Grantee's obligations under this Article VI, Intellectual Property.

6.5 DELIVERY UPON TERMINATION OR EXPIRATION

No later than the first calendar day after the termination or expiration of the Grant Agreement or upon System Agency's request, Grantee shall deliver to System Agency all completed, or

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partially completed, Work Product, including any Incorporated Pre-existing Works, and any and all versions thereof. Grantee's failure to timely deliver such Work Product is a material breach of the Grant Agreement. Grantee will not retain any copies of the Work Product or any documentation or other products or results of Grantee's activities under the Grant Agreement without the prior written consent of System Agency.

6.6 SURVIVAL

The provisions and obligations of this Article survive any termination or expiration of the Grant Agreement.

6.7 SYSTEM AGENCY DATA

A. As between the Parties, all data and information acquired, accessed, or made available to Grantee by, through, or on behalf of System Agency or System Agency contractors, including all electronic data generated, processed, transmitted, or stored by Grantee in the course of providing data processing services in connection with Grantee's performance hereunder (the "System Agency Data"), is owned solely by System Agency.
B. Grantee has no right or license to use, analyze, aggregate, transmit, create derivatives of, copy, disclose, or process the System Agency Data except as required for Grantee to fulfill its obligations under the Grant Agreement or as authorized in advance in writing by System Agency.
C. For the avoidance of doubt, Grantee is expressly prohibited from using, and from permitting any third party to use, System Agency Data for marketing, research, or other non-governmental or commercial purposes, without the prior written consent of System Agency.
D. Grantee shall make System Agency Data available to System Agency, including to System Agency's designated vendors, as directed in writing by System Agency. The foregoing shall be at no cost to System Agency.
E. Furthermore, the proprietary nature of Grantee's systems that process, store, collect, and/or transmit the System Agency Data shall not excuse Grantee's performance of its obligations hereunder.

ARTICLE VII. PROPERTY

7.1 USE OF STATE PROPERTY

A. Grantee is prohibited from using State Property for any purpose other than performing Services authorized under the Grant Agreement.
B. State Property includes, but is not limited to, System Agency's office space, identification badges, System Agency information technology equipment and networks (*e.g.*, laptops, portable printers, cell phones, iPads or tablets, external hard drives, data storage devices, any System Agency-issued software, and the System Agency Virtual Private Network (VPN client)), and any other resources of System Agency.
C. Grantee shall not remove State Property from the continental United States. In addition, Grantee may not use any computing device to access System Agency's network or e-mail while outside of the continental United States.
D. Grantee shall not perform any maintenance services on State Property unless the Grant Agreement expressly authorizes such Services.

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E. During the time that State Property is in the possession of Grantee, Grantee shall be responsible for:
   i. all repair and replacement charges incurred by State Agency that are associated with loss of State Property or damage beyond normal wear and tear, and
   ii. all charges attributable to Grantee's use of State Property that exceeds the Grant Agreement scope. Grantee shall fully reimburse such charges to System Agency within ten (10) calendar days of Grantee's receipt of System Agency's notice of amount due. Use of State Property for a purpose not authorized by the Grant Agreement shall constitute breach of contract and may result in termination of the Grant Agreement and the pursuit of other remedies available to System Agency under contract, at law, or in equity.

7.2 DAMAGE TO STATE PROPERTY

A. In the event of loss, destruction, or damage to any System Agency or State of Texas owned, leased, or occupied property or equipment by Grantee or Grantee's employees, agents, Subcontractors, or suppliers, Grantee shall be liable to System Agency and the State of Texas for the full cost of repair, reconstruction, or replacement of the lost, destroyed, or damaged property.
B. Grantee shall notify System Agency of the loss, destruction, or damage of equipment or property within one (1) business day. Grantee shall reimburse System Agency and the State of Texas for such property damage within ten (10) calendar days after Grantee's receipt of System Agency's notice of amount due.

7.3 PROPERTY RIGHTS UPON TERMINATION OR EXPIRATION OF CONTRACT

In the event the Grant Agreement is terminated for any reason or expires, State Property remains the property of the System Agency and must be returned to the System Agency by the earlier of the end date of the Grant Agreement or upon System Agency's request.

7.4 EQUIPMENT AND PROPERTY

A. The Grantee must ensure equipment with a per-unit cost of $5,000 or greater purchased with grant funds under this award is used solely for the purpose of this Grant or is properly pro-rated for use under this Grant. Grantee must have control systems to prevent loss, damage, or theft of property funded under this Grant. Grantee shall maintain equipment management and inventory procedures for equipment, whether acquired in part or whole with grant funds, until disposition occurs.
B. When equipment acquired by Grantee under this Grant Agreement is no longer needed for the original project or for other activities currently supported by System Agency, the Grantee must properly dispose of the equipment pursuant to 2 CFR and/or TxGMS, as applicable. Upon termination of this Grant Agreement, use and disposal of equipment by the Grantee shall conform with TxGMS requirements.
C. Grantee shall initiate the purchase of all equipment approved in writing by the System Agency in accordance with the schedule approved by System Agency, as applicable. Failure to timely initiate the purchase of equipment may result in the loss of availability of funds for the purchase of equipment. Requests to purchase previously approved equipment after the first quarter in the Grant Agreement must be submitted to the assigned System Agency contract manager.
D. Controlled Assets include firearms, regardless of the acquisition cost, and the following

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assets with an acquisition cost of $500 or more, but less than $5,000: desktop and laptop computers (including notebooks, tablets and similar devices), non-portable printers and copiers, emergency management equipment, communication devices and systems, medical and laboratory equipment, and media equipment. Controlled Assets are considered supplies.

E. System Agency funds must not be used to purchase buildings or real property without prior written approval from System Agency. Any costs related to the initial acquisition of the buildings or real property are not allowable without written pre-approval.

ARTICLE VIII. RECORD RETENTION, AUDIT, AND CONFIDENTIALITY

8.1 RECORD MAINTENANCE AND RETENTION

A. Grantee shall keep and maintain under GAAP or GASB, as applicable, full, true, and complete records necessary to fully disclose to the System Agency, the Texas State Auditor's Office, the United States Government, and their authorized representatives sufficient information to determine compliance with the terms and conditions of this Grant Agreement and all state and federal rules, regulations, and statutes.

B. Grantee shall maintain and retain legible copies of this Grant Agreement and all records relating to the performance of the Grant Agreement, including supporting fiscal documents adequate to ensure that claims for grant funds are in accordance with applicable State of Texas requirements. These records shall be maintained and retained by the Grantee for a minimum of seven (7) years after the Grant Agreement expiration date or seven (7) years after all audits, claims, litigation or disputes involving the Grant Agreement are resolved, whichever is later.

8.2 AGENCY'S RIGHT TO AUDIT

A. Grantee shall make available at reasonable times and upon reasonable notice, and for reasonable periods, work papers, reports, books, records, supporting documents kept current by Grantee pertaining to the Grant Agreement for purposes of inspecting, monitoring, auditing, or evaluating by System Agency and the State of Texas.

B. In addition to any right of access arising by operation of law, Grantee and any of Grantee's affiliate or subsidiary organizations, or Subcontractors shall permit the System Agency or any of its duly authorized representatives, as well as duly authorized federal, state or local authorities, unrestricted access to and the right to examine any site where business is conducted or services are performed, and all records, which includes but is not limited to financial, client and patient records, books, papers or documents related to this Grant Agreement. If the Grant Agreement includes federal funds, federal agencies that shall have a right of access to records as described in this section include: the federal agency providing the funds, the Comptroller General of the United States, the General Accounting Office, the Office of the Inspector General, and any of their authorized representatives. In addition, agencies of the State of Texas that shall have a right of access to records as described in this section include: the System Agency, HHS's contracted examiners, the State Auditor's Office, the Office of the Texas Attorney General, and any successor agencies. Each of these entities may be a duly authorized authority.

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C. If deemed necessary by the System Agency or any duly authorized authority, for the purpose of investigation or hearing, Grantee shall produce original documents related to this Grant Agreement.
D. The System Agency and any duly authorized authority shall have the right to audit billings both before and after payment, and all documentation that substantiates the billings.
E. Grantee shall include this provision concerning the right of access to, and examination of, sites and information related to this Grant Agreement in any Subcontract it awards.

8.3 RESPONSE/COMPLIANCE WITH AUDIT OR INSPECTION FINDINGS

A. Grantee must act to ensure its and its Subcontractors' compliance with all corrections necessary to address any finding of noncompliance with any law, regulation, audit requirement, or generally accepted accounting principle, or any other deficiency identified in any audit, review, or inspection of the Grant Agreement and the services and Deliverables provided. Any such correction will be at Grantee's or its Subcontractor's sole expense. Whether Grantee's action corrects the noncompliance shall be solely the decision of the System Agency.
B. As part of the services, Grantee must provide to HHS upon request a copy of those portions of Grantee's and its Subcontractors' internal audit reports relating to the services and Deliverables provided to the State under the Grant Agreement.

8.4 STATE AUDITOR'S RIGHT TO AUDIT

The state auditor may conduct an audit or investigation of any entity receiving funds from the state directly under the Grant Agreement or indirectly through a subcontract under the Grant Agreement. The acceptance of funds directly under the Grant Agreement or indirectly through a subcontract under the Grant Agreement acts as acceptance of the authority of the state auditor, under the direction of the legislative audit committee, to conduct an audit or investigation in connection with those funds. Under the direction of the legislative audit committee, an entity that is the subject of an audit or investigation by the state auditor must provide the state auditor with access to any information the state auditor considers relevant to the investigation or audit.

8.5 CONFIDENTIALITY

Grantee shall maintain as confidential and shall not disclose to third parties without System Agency's prior written consent, any System Agency information including but not limited to System Agency's business activities, practices, systems, conditions and services. This section will survive termination or expiration of this Grant Agreement. This requirement must be included in all subcontracts awarded by Grantee.

ARTICLE IX. GRANT REMEDIES, TERMINATION AND PROHIBITED ACTIVITIES

9.1 REMEDIES

A. To ensure Grantee's full performance of the Grant Agreement and compliance with applicable law, System Agency reserves the right to hold Grantee accountable for breach of contract or substandard performance and may take remedial or corrective actions,

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including, but not limited to the following:

i. temporarily withholding cash disbursements or reimbursements pending correction of the deficiency;
ii. disallowing or denying use of funds for the activity or action deemed not to be in compliance;
iii. disallowing claims for reimbursement that may require a partial or whole return of previous payments or reimbursements;
iv. suspending all or part of the Grant Agreement;
v. requiring the Grantee to take specific actions in order to remain in compliance with the Grant Agreement;
vi. recouping payments made by the System Agency to the Grantee found to be in error;
vii. suspending, limiting, or placing conditions on the Grantee's continued performance of the Project;
viii. prohibiting the Grantee from receiving additional funds for other grant programs administered by the System Agency until satisfactory compliance resolution is obtained;
ix. withholding release of new grant agreements; and
x. imposing any other remedies, sanctions or penalties authorized under this Grant Agreement or permitted by federal or state statute, law, regulation or rule.

B. Unless expressly authorized by System Agency, Grantee may not be entitled to reimbursement for expenses incurred while the Grant Agreement is suspended.

C. No action taken by System Agency in exercising remedies or imposing sanctions will constitute or operate as a waiver of any other rights or remedies available to System Agency under the Grant Agreement or pursuant to law. Additionally, no action taken by System Agency in exercising remedies or imposing sanctions will constitute or operate as an acceptance, waiver, or cure of Grantee's breach. Unless expressly authorized by System Agency, Grantee may not be entitled to reimbursement for expenses incurred while the Grant Agreement is suspended or after termination.

9.2 TERMINATION FOR CONVENIENCE

The System Agency may terminate the Grant Agreement, in whole or in part, at any time when, in its sole discretion, the System Agency determines that termination is in the best interests of the State of Texas. The termination will be effective on the date specified in the System Agency's notice of termination.

9.3 TERMINATION FOR CAUSE

A. Except as otherwise provided by the U.S. Bankruptcy Code, or any successor law, the System Agency may terminate the Grant Agreement, in whole or in part, upon either of the following conditions:

i. Material Breach

The System Agency may terminate the Grant Agreement, in whole or in part, if the System Agency determines, in its sole discretion, that Grantee has materially breached the Grant Agreement or has failed to adhere to any laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, whether or not such violation prevents or substantially impairs performance of Grantee's duties under the Grant Agreement. Grantee's misrepresentation in any aspect including, but not limited to, of Grantee's Solicitation Application, if any, or Grantee's

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addition to the SAM exclusion list (identification in SAM as an excluded entity) may also constitute a material breach of the Grant Agreement.

ii. Failure to Maintain Financial Viability

The System Agency may terminate the Grant Agreement if the System Agency, in its sole discretion, determines that Grantee no longer maintains the financial viability required to complete the services and deliverables, or otherwise fully perform its responsibilities under the Grant Agreement.

B. System Agency will specify the effective date of such termination in the notice to Grantee. If no effective date is specified, the Grant Agreement will terminate on the date of the notification.

9.4 GRANTEE RESPONSIBILITY FOR SYSTEM AGENCY'S TERMINATION COSTS

If the System Agency terminates the Grant Agreement for cause, the Grantee shall be responsible to the System Agency for all costs incurred by the System Agency and the State of Texas to replace the Grantee. These costs include, but are not limited to, the costs of procuring a substitute grantee and the cost of any claim or litigation attributable to Grantee's failure to perform any work in accordance with the terms of the Grant Agreement.

9.5 INHERENTLY RELIGIOUS ACTIVITIES

Grantee may not use grant funding to engage in inherently religious activities, such as proselytizing, scripture study, or worship. Grantees may engage in inherently religious activities; however, these activities must be separate in time or location from the grant-funded program. Moreover, grantees must not compel program beneficiaries to participate in inherently religious activities. These requirements apply to all grantees, not just faith-based organizations.

9.6 POLITICAL ACTIVITIES

Grant funds cannot be used for the following activities:

A. Grantees and their relevant sub-grantees or subcontractors are prohibited from using grant funds directly or indirectly for political purposes, including lobbying, advocating for legislation, campaigning for, endorsing, contributing to, or otherwise supporting political candidates or parties, and voter registration campaigns. Grantees may use private, or non-System Agency money or contributions for political purposes but may not charge to, or be reimbursed from, System Agency contracts or grants for the costs of such activities.

B. Grant-funded employees may not use official authority or influence to achieve any political purpose and grant funds cannot be used for the salary, benefits, or any other compensation of an elected official.

C. Grant funds may not be used to employ, in any capacity, a person who is required by Chapter 305 of the Texas Government Code to register as a lobbyist. Additionally, grant funds cannot be used to pay membership dues to an organization that partially or wholly pays the salary of a person who is required by Chapter 305 of the Texas Government Code to register as a lobbyist.

D. As applicable, Grantee will comply with 31 USC § 1352, relating to the limitation on use of appropriated funds to influence certain Federal contracting and financial transactions.

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ARTICLE X. INDEMNITY

10.1 General Indemnity

A. GRANTEE SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE STATE OF TEXAS AND SYSTEM AGENCY, AND/OR THEIR OFFICERS, AGENTS, EMPLOYEES, REPRESENTATIVES, CONTRACTORS, ASSIGNEES, AND/OR DESIGNEES FROM ANY AND ALL LIABILITY, ACTIONS, CLAIMS, DEMANDS, OR SUITS, AND ALL RELATED COSTS, ATTORNEYS' FEES, AND EXPENSES ARISING OUT OF OR RESULTING FROM ANY ACTS OR OMISSIONS OF GRANTEE OR ITS AGENTS, EMPLOYEES, SUBCONTRACTORS, ORDER FULFILLERS, OR SUPPLIERS OF SUBCONTRACTORS IN THE EXECUTION OR PERFORMANCE OF THE GRANT AGREEMENT AND ANY PURCHASE ORDERS ISSUED UNDER THE GRANT AGREEMENT.

B. THIS PARAGRAPH IS NOT INTENDED TO AND WILL NOT BE CONSTRUED TO REQUIRE GRANTEE TO INDEMNIFY OR HOLD HARMLESS THE STATE OR THE SYSTEM AGENCY FOR ANY CLAIMS OR LIABILITIES RESULTING FROM THE NEGLIGENT ACTS OF OMISSIONS OF THE SYSTEM AGENCY OR ITS EMPLOYEES.

C. For the avoidance of doubt, System Agency shall not indemnify Grantee or any other entity under the Grant Agreement.

10.2 Intellectual Property

GRANTEE SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE SYSTEM AGENCY AND THE STATE OF TEXAS FROM AND AGAINST ANY AND ALL CLAIMS, VIOLATIONS, MISAPPROPRIATIONS, OR INFRINGEMENT OF ANY PATENT, TRADEMARK, COPYRIGHT, TRADE SECRET, OR OTHER INTELLECTUAL PROPERTY RIGHTS AND/OR OTHER INTANGIBLE PROPERTY, PUBLICITY OR PRIVACY RIGHTS, AND/OR IN CONNECTION WITH OR ARISING FROM:

i. THE PERFORMANCE OR ACTIONS OF GRANTEE PURSUANT TO THIS GRANT AGREEMENT;

ii. ANY DELIVERABLE, WORK PRODUCT, CONFIGURED SERVICE OR OTHER SERVICE PROVIDED HEREUNDER; AND/OR

iii. SYSTEM AGENCY'S AND/OR GRANTEE'S USE OF OR ACQUISITION OF ANY REQUESTED SERVICES OR OTHER ITEMS PROVIDED TO SYSTEM AGENCY BY GRANTEE OR OTHERWISE TO WHICH SYSTEM AGENCY HAS ACCESS AS A RESULT OF GRANTEE'S PERFORMANCE UNDER THE GRANT AGREEMENT.

10.3 Additional Indemnity Provisions

A. GRANTEE AND SYSTEM AGENCY AGREE TO FURNISH TIMELY WRITTEN NOTICE TO EACH OTHER OF ANY INDEMNITY CLAIM. GRANTEE SHALL BE LIABLE TO PAY ALL COSTS OF DEFENSE, INCLUDING ATTORNEYS' FEES.

B. THE DEFENSE SHALL BE COORDINATED BY THE GRANTEE WITH THE

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OFFICE OF THE TEXAS ATTORNEY GENERAL WHEN TEXAS STATE AGENCIES ARE NAMED DEFENDANTS IN ANY LAWSUIT AND GRANTEE MAY NOT AGREE TO ANY SETTLEMENT WITHOUT FIRST OBTAINING THE CONCURRENCE FROM THE OFFICE OF THE TEXAS ATTORNEY GENERAL.

C. GRANTEE SHALL REIMBURSE SYSTEM AGENCY AND THE STATE OF TEXAS FOR ANY CLAIMS, DAMAGES, COSTS, EXPENSES OR OTHER AMOUNTS, INCLUDING, BUT NOT LIMITED TO, ATTORNEYS' FEES AND COURT COSTS, ARISING FROM ANY SUCH CLAIM. IF THE SYSTEM AGENCY DETERMINES THAT A CONFLICT EXISTS BETWEEN ITS INTERESTS AND THOSE OF GRANTEE OR IF SYSTEM AGENCY IS REQUIRED BY APPLICABLE LAW TO SELECT SEPARATE COUNSEL, SYSTEM AGENCY WILL BE PERMITTED TO SELECT SEPARATE COUNSEL AND GRANTEE SHALL PAY ALL REASONABLE COSTS OF SYSTEM AGENCY'S COUNSEL.

ARTICLE XI. GENERAL PROVISIONS

11.1 AMENDMENTS

Except as otherwise expressly provided, the Grant Agreement may only be amended by a written Amendment executed by both Parties.

11.2 NO QUANTITY GUARANTEES

The System Agency makes no guarantee of volume or usage of work under this Grant Agreement. All work requested may be on an irregular and as needed basis throughout the Grant Agreement term.

11.3 CHILD ABUSE REPORTING REQUIREMENTS

A. Grantees shall comply with child abuse and neglect reporting requirements in Texas Family Code Chapter 261. This section is in addition to and does not supersede any other legal obligation of the Grantee to report child abuse.

B. Grantee shall develop, implement and enforce a written policy that includes at a minimum the System Agency's Child Abuse Screening, Documenting, and Reporting Policy for Grantees/Providers and train all staff on reporting requirements.

C. Grantee shall use the Texas Abuse Hotline Website located at https://www.txabusehotline.org/Login/Default.aspx as required by the System Agency. Grantee shall retain reporting documentation on site and make it available for inspection by the System Agency.

11.4 CERTIFICATION OF MEETING OR EXCEEDING TOBACCO-FREE WORKPLACE POLICY MINIMUM STANDARDS

A. Grantee certifies that it has adopted and enforces a Tobacco-Free Workplace Policy that meets or exceeds all of the following minimum standards of:

i. Prohibiting the use of all forms of tobacco products, including but not limited to cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff and chewing tobacco;

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ii. Designating the property to which this Policy applies as a "designated area," which must at least comprise all buildings and structures where activities funded under this Grant Agreement are taking place, as well as Grantee owned, leased, or controlled sidewalks, parking lots, walkways, and attached parking structures immediately adjacent to this designated area;
iii. Applying to all employees and visitors in this designated area; and
iv. Providing for or referring its employees to tobacco use cessation services.

B. If Grantee cannot meet these minimum standards, it must obtain a waiver from the System Agency.

11.5 INSURANCE AND BONDS

Unless otherwise specified in this Contract, Grantee shall acquire and maintain, for the duration of this Contract, insurance coverage necessary to ensure proper fulfillment of this Contract and potential liabilities thereunder with financially sound and reputable insurers licensed by the Texas Department of Insurance, in the type and amount customarily carried within the industry as determined by the System Agency. Grantee shall provide evidence of insurance as required under this Contract, including a schedule of coverage or underwriter's schedules establishing to the satisfaction of the System Agency the nature and extent of coverage granted by each such policy, upon request by the System Agency. In the event that any policy is determined by the System Agency to be deficient to comply with the terms of this Contract, Grantee shall secure such additional policies or coverage as the System Agency may reasonably request or that are required by law or regulation. If coverage expires during the term of this Contract, Grantee must produce renewal certificates for each type of coverage. In addition, if required by System Agency, Grantee must obtain and have on file a blanket fidelity bond that indemnifies System Agency against the loss or theft of any grant funds, including applicable matching funds. The fidelity bond must cover the entirety of the grant term and any subsequent renewals. The failure of Grantee to comply with these requirements may subject Grantee to remedial or corrective actions detailed in section 10.1, General Indemnity, above.

These and all other insurance requirements under the Grant apply to both Grantee and its Subcontractors, if any. Grantee is responsible for ensuring its Subcontractors' compliance with all requirements.

11.6 LIMITATION ON AUTHORITY

A. Grantee shall not have any authority to act for or on behalf of the System Agency or the State of Texas except as expressly provided for in the Grant Agreement; no other authority, power, or use is granted or implied. Grantee may not incur any debt, obligation, expense, or liability of any kind on behalf of System Agency or the State of Texas.
B. Grantee may not rely upon implied authority and is not granted authority under the Grant Agreement to:
i. Make public policy on behalf of the System Agency;
ii. Promulgate, amend, or disregard administrative regulations or program policy decisions made by State and federal agencies responsible for administration of a System Agency program; or
iii. Unilaterally communicate or negotiate with any federal or state agency or the Texas

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Legislature on behalf of the System Agency regarding System Agency programs or the Grant Agreement. However, upon System Agency request and with reasonable notice from System Agency to the Grantee, the Grantee shall assist the System Agency in communications and negotiations regarding the Work under the Grant Agreement with state and federal governments.

11.7 CHANGE IN LAWS AND COMPLIANCE WITH LAWS

Grantee shall comply with all laws, regulations, requirements and guidelines applicable to a Grantee providing services and products required by the Grant Agreement to the State of Texas, as these laws, regulations, requirements and guidelines currently exist and as amended throughout the term of the Grant Agreement. Notwithstanding Section 11.1, Amendments, above, System Agency reserves the right, in its sole discretion, to unilaterally amend the Grant Agreement to incorporate any modifications necessary for System Agency's compliance, as an agency of the State of Texas, with all applicable state and federal laws, regulations, requirements and guidelines.

11.8 SUBCONTRACTORS

Grantee may not subcontract any or all of the Work and/or obligations under the Grant Agreement without prior written approval of the System Agency. Subcontracts, if any, entered into by the Grantee shall be in writing and be subject to the requirements of the Grant Agreement. Should Grantee subcontract any of the services required in the Grant Agreement, Grantee expressly understands and acknowledges System Agency is in no manner liable to any subcontractor(s) of Grantee. In no event shall this provision relieve Grantee of the responsibility for ensuring that the services performed under all subcontracts are rendered in compliance with the Grant Agreement.

11.9 PERMITTING AND LICENSURE

At Grantee's sole expense, Grantee shall procure and maintain for the duration of this Grant Agreement any state, county, city, or federal license, authorization, insurance, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by Grantee to provide the goods or services required by this Grant Agreement. Grantee shall be responsible for payment of all taxes, assessments, fees, premiums, permits, and licenses required by law. Grantee shall be responsible for payment of any such government obligations not paid by its Subcontractors during performance of this Grant Agreement.

11.10 INDEPENDENT CONTRACTOR

Grantee and Grantee's employees, representatives, agents, Subcontractors, suppliers, and third-party service providers shall serve as independent contractors in providing the services under the Grant Agreement. Neither Grantee nor System Agency is an agent of the other and neither may make any commitments on the other party's behalf. The Grantee is not a "governmental body" solely by virtue of this Grant Agreement or receipt of grant funds under this Grant Agreement. Grantee shall have no claim against System Agency for vacation pay, sick leave, retirement benefits, social security, worker's compensation, health or disability benefits, unemployment insurance benefits, or employee benefits of any kind. The Grant Agreement shall not create any joint venture, partnership, agency, or employment relationship between Grantee and System Agency.

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11.11 GOVERNING LAW AND VENUE

The Grant Agreement shall be governed by and construed in accordance with the laws of the State of Texas, without regard to the conflicts of law provisions. The venue of any suit arising under the Grant Agreement is fixed in any court of competent jurisdiction of Travis County, Texas, unless the specific venue is otherwise identified in a statute which directly names or otherwise identifies its applicability to the System Agency.

11.12 SEVERABILITY

If any provision contained in this Grant Agreement is held to be unenforceable by a court of law or equity, such construction will not affect the legality, validity, or enforceability of any other provision or provisions of this Grant Agreement. It is the intent and agreement of the Parties this Grant Agreement shall be deemed amended by modifying such provision to the extent necessary to render it valid, legal and enforceable while preserving its intent or, if such modification is not possible, by substituting another provision that is valid, legal and enforceable and that achieves the same objective. All other provisions of this Grant Agreement will continue in full force and effect.

11.13 SURVIVABILITY

Expiration or termination of the Grant Agreement for any reason does not release Grantee from any liability or obligation set forth in the Grant Agreement that is expressly stated to survive any such expiration or termination, that by its nature would be intended to be applicable following any such expiration or termination, or that is necessary to fulfill the essential purpose of the Grant Agreement, including without limitation the provisions regarding return of grant funds, audit requirements, records retention, public information, warranty, indemnification, confidentiality, and rights and remedies upon termination.

11.14 FORCE MAJEURE

Neither Grantee nor System Agency shall be liable to the other for any delay in, or failure of performance, of any requirement included in the Grant Agreement caused by force majeure. The existence of such causes of delay or failure shall extend the period of performance until after the causes of delay or failure have been removed provided the non-performing party exercises all reasonable due diligence to perform. Force majeure is defined as acts of God, war, fires, explosions, hurricanes, floods, failure of transportation, or other causes that are beyond the reasonable control of either party and that by exercise of due foresight such party could not reasonably have been expected to avoid, and which, by the exercise of all reasonable due diligence, such party is unable to overcome.

11.15 NO IMPLIED WAIVER OF PROVISIONS

The failure of the System Agency to object to or to take affirmative action with respect to any conduct of the Grantee which is in violation or breach of the terms of the Grant Agreement shall not be construed as a waiver of the violation or breach, or of any future violation or breach.

11.16 FUNDING DISCLAIMERS AND LABELING

A. Grantee shall not use System Agency's name or refer to System Agency directly or indirectly in any media appearance, public service announcement, or disclosure relating to this Grant Agreement including any promotional material without first obtaining

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written consent from System Agency. The foregoing prohibition includes, without limitation, the placement of banners, pop-up ads, or other advertisements promoting Grantee's or a third party's products, services, workshops, trainings, or other commercial offerings on any website portal or internet-based service or software application hosted or managed by Grantee. This does not limit the Grantee's responsibility to comply with obligations related to the Texas Public Information Act or Texas Open Meetings Act.

B. In general, no publication (including websites, reports, projects, etc.) may convey System Agency's recognition or endorsement of the Grantee's project without prior written approval from System Agency. Publications funded in part or wholly by HHS grant funding must include a statement that "HHS and neither any of its components operate, control, are responsible for, or necessarily endorse, this publication (including, without limitation, its content, technical infrastructure, and policies, and any services or tools provided)" at HHS's request.

11.17 MEDIA RELEASES

A. Grantee shall not use System Agency's name, logo, or other likeness in any press release, marketing material or other announcement without System Agency's prior written approval. System Agency does not endorse any vendor, commodity, or service. Grantee is not authorized to make or participate in any media releases or public announcements pertaining to this Grant Agreement or the Services to which they relate without System Agency's prior written consent, and then only in accordance with explicit written instruction from System Agency.

B. Grantee may publish, at its sole expense, results of Grantee performance under the Grant Agreement with the System Agency's prior review and approval, which the System Agency may exercise at its sole discretion. Any publication (written, visual, or sound) will acknowledge the support received from the System Agency and any Federal agency, as appropriate.

11.18 PROHIBITION ON NON-COMPETE RESTRICTIONS

Grantee shall not require any employees or Subcontractors to agree to any conditions, such as non-compete clauses or other contractual arrangements, that would limit or restrict such persons or entities from employment or contracting with the State of Texas.

11.19 SOVEREIGN IMMUNITY

Nothing in the Grant Agreement will be construed as a waiver of the System Agency's or the State's sovereign immunity. This Grant Agreement shall not constitute or be construed as a waiver of any of the privileges, rights, defenses, remedies, or immunities available to the System Agency or the State of Texas. The failure to enforce, or any delay in the enforcement, of any privileges, rights, defenses, remedies, or immunities available to the System Agency or the State of Texas under the Grant Agreement or under applicable law shall not constitute a waiver of such privileges, rights, defenses, remedies, or immunities or be considered as a basis for estoppel. System Agency does not waive any privileges, rights, defenses, or immunities available to System Agency by entering into the Grant Agreement or by its conduct prior to or subsequent to entering into the Grant Agreement.

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11.20 ENTIRE CONTRACT AND MODIFICATION

The Grant Agreement constitutes the entire agreement of the Parties and is intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Any additional or conflicting terms in any future document incorporated into the Grant Agreement will be harmonized with this Grant Agreement to the extent possible.

11.21 COUNTERPARTS

This Grant Agreement may be executed in any number of counterparts, each of which will be an original, and all such counterparts will together constitute but one and the same Grant Agreement.

11.22 PROPER AUTHORITY

Each Party represents and warrants that the person executing this Grant Agreement on its behalf has full power and authority to enter into this Grant Agreement.

11.23 E-VERIFY PROGRAM

Grantee certifies that it utilizes and will continue to utilize the U.S. Department of Homeland Security's E-Verify system to determine the eligibility of:

A. all persons employed to perform duties within Texas during the term of the Grant Agreement; and
B. all persons, (including subcontractors) assigned by the Grantee to perform work pursuant to the Grant Agreement within the United States of America.

11.24 CIVIL RIGHTS

A. Grantee agrees to comply with state and federal anti-discrimination laws, including:
   i. Title VI of the Civil Rights Act of 1964 (42 U.S.C. §2000d et seq.);
   ii. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. §794);
   iii. Americans with Disabilities Act of 1990 (42 U.S.C. §12101 et seq.);
   iv. Age Discrimination Act of 1975 (42 U.S.C. §§6101-6107);
   v. Title IX of the Education Amendments of 1972 (20 U.S.C. §§1681-1688);
   vi. Food and Nutrition Act of 2008 (7 U.S.C. §2011 et seq.); and
   vii. The System Agency's administrative rules, as set forth in the Texas Administrative Code, to the extent applicable to this Grant Agreement.
B. Grantee agrees to comply with all amendments to the above-referenced laws, and all requirements imposed by the regulations issued pursuant to these laws. These laws provide in part that no persons in the United States may, on the grounds of race, color, national origin, sex, age, disability, political beliefs, or religion, be excluded from participation in or denied any aid, care, service or other benefits provided by Federal or State funding, or otherwise be subjected to discrimination.
C. Grantee agrees to comply with Title VI of the Civil Rights Act of 1964, and its implementing regulations at 45 C.F.R. Part 80 or 7 C.F.R. Part 15, prohibiting a contractor from adopting and implementing policies and procedures that exclude or have the effect of excluding or limiting the participation of clients in its programs, benefits, or activities on the basis of national origin. State and federal civil rights laws require contractors to provide alternative methods for ensuring access to services for applicants and recipients who cannot express themselves fluently in English. Grantee agrees to take

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reasonable steps to provide services and information, both orally and in writing, in appropriate languages other than English, in order to ensure that persons with limited English proficiency are effectively informed and can have meaningful access to programs, benefits, and activities.

D. Grantee agrees to post applicable civil rights posters in areas open to the public informing clients of their civil rights and including contact information for the HHS Civil Rights Office. The posters are available on the HHS website at: https://hhs.texas.gov/about-hhs/your-rights/civil-rights-office/civil-rights-posters.

E. Grantee agrees to comply with Executive Order 13279, and its implementing regulations at 45 C.F.R. Part 87 or 7 C.F.R. Part 16. These provide in part that any organization that participates in programs funded by direct financial assistance from the United States Department of Agriculture or the United States Department of Health and Human Services shall not discriminate against a program beneficiary or prospective program beneficiary on the basis of religion or religious belief.

F. Upon request, Grantee shall provide HHSC's Civil Rights Office with copies of the Grantee's civil rights policies and procedures.

G. Grantee must notify HHSC's Civil Rights Office of any complaints of discrimination received relating to its performance under this Grant Agreement. This notice must be delivered no more than ten (10) calendar days after receipt of a complaint. Notice provided pursuant to this section must be directed to:

HHSC Civil Rights Office
701 W. 51st Street, Mail CodeW206
Austin, Texas 78751
Phone Toll Free: (888) 388-6332
Phone: (512) 438-4313
Fax: (512) 438-5885
Email: HHSCivilRightsOffice@hhsc.state.tx.us.

11.25 Enterprise Information Management Standards

Grantee shall conform to HHS standards for data management as described by the policies of the HHS Chief Data and Analytics Officer. These include, but are not limited to, standards for documentation and communication of data models, metadata, and other data definition methods that are required by HHS for ongoing data governance, strategic portfolio analysis, interoperability planning, and valuation of HHS System data assets.

11.26 Disclosure of Litigation

A. The Grantee must disclose in writing to the contract manager assigned to this Grant Agreement any material civil or criminal litigation or indictment either threatened or pending involving the Grantee. "Threatened litigation" as used herein shall include governmental investigations and civil investigative demands. "Litigation" as used herein shall include administrative enforcement actions brought by governmental agencies. The Grantee must also disclose any material litigation threatened or pending involving Subcontractors, consultants, and/or lobbyists. For purposes of this section, "material" refers, but is not limited, to any action or pending action that a reasonable person knowledgeable in the applicable industry would consider relevant to the Work under the Grant Agreement or any development such a person would want to be aware of in order to stay fully apprised of the total mix of information relevant to the Work, together with

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any litigation threatened or pending that may result in a substantial change in the Grantee's financial condition.

B. This is a continuing disclosure requirement; any litigation commencing after Grant Agreement Award must be disclosed in a written statement to the assigned contract manager within seven calendar days of its occurrence.

11.27 NO THIRD PARTY BENEFICIARIES

The Grant Agreement is made solely and specifically among and for the benefit of the Parties named herein and their respective successors and assigns, and no other person shall have any right, interest, or claims hereunder or be entitled to any benefits pursuant to or on account of the Grant Agreement as a third-party beneficiary or otherwise.

11.28 BINDING EFFECT

The Grant Agreement shall inure to the benefit of, be binding upon, and be enforceable against each Party and their respective permitted successors, assigns, transferees, and delegates.

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Attachment F.6
Fiscal Federal Funding Accountability and Transparency Act (FFATA) CERTIFICATION

The certifications enumerated below represent material facts upon which DSHS relies when reporting information to the federal government required under federal law. If the Department later determines that the Contractor knowingly rendered an erroneous certification, DSHS may pursue all available remedies in accordance with Texas and U.S. law. Signor further agrees that it will provide immediate written notice to DSHS if at any time Signor learns that any of the certifications provided for below were erroneous when submitted or have since become erroneous by reason of changed circumstances. ***If the Signor cannot certify all of the statements contained in this section, Signor must provide written notice to DSHS detailing which of the below statements it cannot certify and why*.**

Legal Name of Contractor: City of Midland Health Department	**FFATA Contact # 1 Name, Email and Phone Number:** Whitney S. Craig wcraig@midlandtexas.gov 432-681-7645
Primary Address of Contractor: 3303 W. Illinois Ave Sp. 22 Midland, TX 79703	**FFATA Contact #2 Name, Email and Phone Number:** Angela Schlemeyer aschlemeyer@midlandtexas.gov 432-685-7219
ZIP Code: 9-digits Required www.usps.com 79703-6213	**DUNS Number: 9-digits Required www.sam.gov** 073186579
State of Texas Comptroller Vendor Identification Number (VIN) 14 Digits 17560006086016	

Printed Name of Authorized Representative Whitney S. Craig	**Signature of Authorized Representative** DocuSigned by: Whitney S. Craig, Dr.PH, MPH 83EBFB35036D49F...
Title of Authorized Representative Health Services Manager	**Date** March 1, 2022

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Attachment F.6
Fiscal Federal Funding Accountability and Transparency Act (FFATA) CERTIFICATION

As the duly authorized representative (Signor) of the Contractor, I hereby certify that the statements made by me in this certification form are true, complete and correct to the best of my knowledge.

Did your organization have a gross income, from all sources, of less than $300,000 in your previous tax year? ☐ Yes ☒ No

If your answer is "Yes", skip questions "A", "B", and "C" and finish the certification.
If your answer is "No", answer questions "A" and "B".

A. Certification Regarding % of Annual Gross from Federal Awards.

Did your organization receive 80% or more of its annual gross revenue from federal awards during the preceding fiscal year? ☐ Yes ☒ No

B. Certification Regarding Amount of Annual Gross from Federal Awards.

Did your organization receive $25 million or more in annual gross revenues from federal awards in the preceding fiscal year? ☐ Yes ☒ No

If your answer is "Yes" to both question "A" and "B", you must answer question "C".
If your answer is "No" to either question "A" or "B", skip question "C" and finish the certification.

C. Certification Regarding Public Access to Compensation Information.

Does the public have access to information about the compensation of the senior executives in your business or organization (including parent organization, all branches, and all affiliates worldwide) through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986? ☐ Yes ☐ No

If your answer is "Yes" to this question, where can this information be accessed?

NA

If your answer is "No" to this question, you must provide the names and total compensation of the top five highly compensated officers below.

For example:

John Blum:500000;Mary Redd:50000;Eric Gant:400000;Todd Platt:300000; Sally Tom:300000

Provide compensation information here: NA

NA

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Public Health Emergency Preparedness
Work Plan and Vulnerable Populations Plan Template
Budget Period (BP) 4- FY23
Term: 7/1/2022 – 6/30/2023

Due: January 25, 2022

Jurisdiction: City of Midland Health Department

Report Completed by: John Floyd

Email: jfloyd@midlandtexas.gov

Phone: 432-681-7648

Instructions: This template should be used to outline the work plan for Budget Period (BP) 4 – FY23 and provide a general summary of planned activities. Jurisdiction should:

- Select three (3) or more capabilities to work on in BP4– FY23.
- Develop the work plan by identifying jurisdictional needs within a capability, assessing current resources, and developing a plan to address identified gaps. Work Plan tasks and activities may be linked to the ongoing COVID-19 response.
- **Carrying capabilities forward from previous budget periods:** Capabilities for BP4– FY23 may be the same as prior year selections. If the jurisdiction intends to carry work forward from BP3 – FY22 to BP4 – FY23, please mark this on page 3.
- **Changing capabilities:** Capabilities can be changed during the budget period. If there is a change to capabilities, please email a notification to the **PHEP email inbox** (PHEP@dshs.texas.gov).
- **Medical Countermeasures:** If Capabilities 8 and/or 9 (medical countermeasures) are selected, jurisdictions must select at least one (1) additional capability.
- Complete the **Vulnerable Populations Planning Module**.

Please email the completed jurisdictional work plan to the **PHEP email inbox** (PHEP@dshs.texas.gov) by **January 25, 2022**

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Public Health Emergency Preparedness

Work Plan Template

Work Plan Executive Summary:

Please provide a very brief overview of the jurisdiction's goals for BP4 – FY23.

- Increase community resilience and self sufficiency
- Ensure situational awareness is maintained between Local Health Department (LHD), Regional Health Medical Operations Center (RHMOC), City/ County Emergency Operations Center (EOC) and other response partners during an incident or event of Public Health Concern
- Improve capability of disseminating timely and accurate messages of Public Health Significance to affected population.
- Improve ability to conduct Medical Countermeasure Dispensing operations
- Maintain surveillance and epidemiological investigation capability
- Increase ability to recruit and manage volunteers

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Capabilities

FY22: Please mark the capabilities that were addressed during BP3– FY22 in the column labeled *FY22*.

FY23: Please mark three (3) capabilities that will be addressed during BP4 – FY23 in the column labeled *FY23*.

COVID-19 Carryover: Please mark if capabilities that will be carried over to FY23 due to COVD-19 response activities in the column labeled *COVID-19 Carryover*.

CAPABILITY	FY22	FY23	COVID-19 Carryover
Community Preparedness	x	x	☐
Community Recovery	☐	☐	☐
Emergency Operations Coordination	x	x	x
Emergency Public Information and Warning	x	x	x
Fatality Management	☐	☐	☐
Information Sharing	☐	☐	☐
Mass Care	☐	☐	☐
Medical Countermeasures Dispensing and Administration	x	x	x
Medical Materiel Management and Distribution	☐	☐	☐
Medical Surge	x	x	x
Nonpharmaceutical Intervention	☐	☐	☐
Public Health Laboratory Testing	☐	☐	☐
Public Health Surveillance and Epidemiological Investigation	x	x	x
Responder Safety and Health	☐	☐	☐
Volunteer Management	☐	x	☐

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Capability	
x Capability 1: Community Preparedness	
Assessment of current relevant resources:	• Energy Sector has well established safety advocacy groups in place that are willing to serve as conduit for information and training, most notably Permian Basin Service, Transmission, Exploration & Production Safety Network (PBSTEPS) and the Damage Prevention Council of Texas (DPC) • The Petroleum Professional Development Center (PPDC) of Midland College offers numerous safety courses to the community • Red Cross provides training • Funding has been made available to hire Certified Health Education Specialist (CHES)
Identified needs/gaps:	• No Community Emergency Response Team (CERT) program • Perception / belief that notifying Emergency Management is only action that needs to be taken • Lack a CHES to address community health education / outreach
Objective(s):	• Increase ability of the City of Midland / Midland County to prepare for, withstand, and recover from a public health incident / disaster • Increase community resilence
Outcome(s):	• Increased collaboration with safety organizations, i.e. Damage Prevention Council of Texas (DPC) and Permian Basin Safety Transmission Exploration & Production Safety Network (PBSTEPS) in regards to training and sharing of information • Increased presence at Health Fairs and other Community Outreach Events • Enhanced development and maintenance of cooperation between public, civic, professional, and voluntary agencies • Implementation and evaluation of health education, clinical training programs, conferences, and other associated activities for individual, group, and/or community needs
Output(s):	• Validation through real world events and / or incidents • Testing capabilities through drills / exercises • Completion of After Action Report (AAR) • Implementation of Improvement Action Plan (IAP)

Supporting Activities

Activity Description	Lead Assigned Personnel	Contributing Partners (if any)	Consultant (if any)	Estimated Date of Completion
Help facilitate Hazard Vulnerability Assessment (HVA)	City of Midland PHEP Coordinator	• PBSTEPS • DPC of Texas • Red Cross • JRAC	N/A	6-30-2022
Promote educational opportunities	City of Midland PHEP Coordinator	• Red Cross • Midland College • DPC • PBSTEPS	N/A	6-30-2022

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Capability	
x Capability 3: Emergency Operations Coordination	

Assessment of current relevant resources:	• Public Health Emergency Operation Center (PHEOC) Activation Guidelines updated and disseminated.
	  ○ Public Health Incident Management websites are hyperlinked in these guidelines
	  ○ Templates for completing Situation Reports and ICS Forms are included
	• Access to Incident Management Websites such as the Public Health Information Network, EMResources, Texas Disaster Volunteer Registry and Veoci

Identified needs/gaps:	• Support for the Public Health Information Network (PHIN) ended October 2021. There is a lack of familiarity with the system replacing PHIN • City of Midland Health Department Command Staff has not received ICS 300 and ICS 400 Expanding Incident Training • Majority of staff lack experience using Veoci
Objective(s):	• Ensure situational awareness is maintained between Local Health Department (LHD), Regional Health Medical Operations Center (RHMOC), City/ County Emergency Operations Center (EOC) and other response partners during an incident or event of Public Health Concern
Outcome(s):	• Documentation of City of Midland Health Department Command Staff receiving formal, organized EOC Operations Coordination training. • Documentation of City of Midland Health Department Command Staff receiving formal, organized training on Veoci
Output(s):	• Validation through real world events and / or incidents • Testing capabilities through drills / exercises • Completion After Action Report (AAR) • Implementation Improvement Action Plan (IAP)

Supporting Activities

Activity Description	Lead Assigned Personnel	Contributing Partners (if any)	Consultant (if any)	Estimated Date of Completion
Ensure City of Midland Health Department command staff receive training on Veoci and ICS 300 and 400	City of Midland PHEP Coordinator	Emergency Management Coordinator	N/A	6-30-2022
Become familiar with PHIN replacement	City of Midland PHEP Coordinator	DSHS	N/A	6-30-2022

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Capability	
x Capability 4: Emergency Public Information and Warning	
Assessment of current relevant resources:	• "Crisis & Emergency Risk Communication Guidelines" have been developed and disseminated. • Shelf Kits with messaging templates for Class A Biologicals are available both electronically and hard copy. • Website which can be used to disseminate information to affected population. • City of Midland Facebook Page • Some personnel have received CERC training from the CDC Crisis and Emergency Risk Communication (CERC) Online Training progam
Identified needs/gaps:	• No documentation of City of Midland Health Department Command Staff receiving Crisis & Emergency Risk Communication Training • No documentation of organized, interdisciplinary training with Public Information Officer • City of Midland Health Department lacks independent social media presence • Pool of personnel with technical skill to update and maintain website is very limited.
Objective(s):	• Improve capability of disseminating timely and accurate messages of Public Health Significance to affected population.
Outcome(s):	• Obtain verifiable documentation that City of Midland Health Department command staff have received Crisis & Emergency Risk Communication Training • Obtain verifiable documentation that City of Midland Health Department command staff have participated in interdisciplinary training with Public Information Officer • Increased number of personnel with capability and skill to manage website. • Increased Credible & Legitimate Social Media Presence / Usage
Output(s):	• Validation through real world events and / or incidents • Testing capabilities through drills / exercises • Completion After Action Report (AAR) • Implementation Improvement Action Plan (IAP)

Supporting Activities

Activity Description	Lead Assigned Personnel	Contributing Partners (if any)	Consultant (if any)	Estimated Date of Completion
Collaborating with PIO to ensure City of Midland Health Department Command Staff receive training to maintain Midland Health & Senior Services website.	City of Midland Health Department PHEP Coordinator	• CivicPlus • City of Midland Public information Officer (PIO)	N/A	6-30-2022
Share links to CDC "Principles of Risk Communication" web based training with PIO and City of Midland Health Department Command Staff	City of Midland Health Department PHEP Coordinator	CDC	N/A	6-30-2022

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Capability	
x Capability 8: Medical Countermeasure Dispensing and Administration	
Assessment of current relevant resources:	• Robust Unified Command Team established • Sufficient trained staff for First Responder POD • Several team members gained real world experience at COVID 19 Mass Vaccine Dispensing Site • Simplified Screening and Just in Time Training (JITT) Forms available
Identified needs/gaps:	• Increasing population in city of Midland / Midland County has led to the need for more POD's in order to meet dispensing time standards • Loss of existing / identified PODS due to building demolition • Lack of trained core personnel / cadre to staff existing PODS • Lack of signs to direct foot traffic inside PODS
Objective(s):	• Dispense more medication to more people at more POD's in less time.
Outcome(s):	• Increased throughput with a corresponding decreased time as measured in drills and exercises • Increased number of Push Sites / Closed PODS in the City of Midland / Midland County • Increased number of trained cadre / core personnel to serve as foundation of POD staff
Output(s):	• Validation through real world events and / or incidents • Testing capabilities through drills / exercises • Completion After Action Report (AAR) • Implementation Improvement Action Plan (IAP)

Supporting Activities

Activity Description	Lead Assigned Personnel	Contributing Partners (if any)	Consultant (if any)	Estimated Date of Completion
Train personnel at Push Site / Closed PODS to conduct POD / Dispensing operations	City of Midland Health Department PHEP Coordinator	• Unified Command	N/A	6-30-2022
Obtain signs to direct traffic at PODS	City of Midland Health Department PHEP Coordinator	N/A	N/A	6-30-2022

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Capability	
x Capability 13: Public Health Surveillance and Epidemiological Investigation	
Assessment of current relevant resources:	• Funding made available to hire contact tracers • Funding made available to hire epidemiologist • Access to Region 9 / 10 Epidemiologist • Access to Electronic Disease Reporting Systems
Identified needs/gaps:	• Reallocation of available Surveillance and Epidemiological Investigation resources to COVID 19 response made it difficult to address other Reportable Conditions and Diseases • Difficulty recruiting and retaining Contact Tracers, e.g, Contact tracing section is chronically understaffed
Objective(s):	• Sustain ability to conduct investigation of both foodborne and infectious disease outbreaks
Outcome(s):	• Increased ability to provide statistical data and reports to jurisdictional leadership and other community stakeholders / partners • Maintenance of surveillance systems that can identify health problems, threats, and environmental hazards • Increased ability to receive and respond to (or investigate) reports 24/7.
Output(s):	• Validation through real world events and / or incidents • Testing capabilities through drills / exercises • Completion After Action Report (AAR) • Implementation Improvement Action Plan (IAP)

Supporting Activities

Activity Description	Lead Assigned Personnel	Contributing Partners (if any)	Consultant (if any)	Estimated Date of Completion
Hire full time epidemiologist	• Health Department Manager • Lead Public Health Nurse	N/A	N/A	6-30-2022

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Certificate Of Completion

Envelope Id: D85CDD9ED82D403E832E4D9B20589311
Status: Completed
Subject: 537-18-0134-00001,Midland County Health District, Amendment #6, CPS_Hazards
Source Envelope:
Document Pages: 53
Signatures: 3
Certificate Pages: 5
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Enabled
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Envelope Originator:
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11493 Sunset Hills Road
#100
Reston, VA 20190
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Signer Events	Signature	Timestamp
Whitney S. Craig, Dr.PH, MPH wcraig@midlandtexas.gov Health Services Manager City of Midland Health & Senior Services Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Accepted: 2/25/2022 1:55:06 PM ID: 25d71781-09b4-4236-8fe7-f0c87edc152e	DocuSigned by: Whitney S. Craig, Dr.PH, MPH 83EBFB35036D49F... Signature Adoption: Pre-selected Style Using IP Address: 65.36.71.2	Sent: 2/22/2022 5:00:03 PM Viewed: 2/25/2022 1:55:06 PM Signed: 3/1/2022 1:02:46 PM
Jonah Wilczynski jonah.wilczynski@dshs.texas.gov Unit Director Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Accepted: 3/1/2022 4:46:50 PM ID: 77963d79-23b8-4e2a-87e5-0b19ff772253	**Completed** Using IP Address: 167.137.1.13	Sent: 3/1/2022 1:02:52 PM Viewed: 3/1/2022 4:46:50 PM Signed: 3/1/2022 4:47:08 PM
Patty Melchior Patty.Melchior@dshs.texas.gov Director, DSHS CMS Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Accepted: 3/1/2022 4:57:25 PM ID: 51b1737c-0911-4ae8-be14-86ce8b2fc373	**Completed** Using IP Address: 167.137.1.17	Sent: 3/1/2022 4:47:14 PM Viewed: 3/1/2022 4:57:25 PM Signed: 3/1/2022 4:57:46 PM
David Gruber David.Gruber@dshs.texas.gov Associate Commissioner for RLHS Texas Health and Human Services Commission Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Accepted: 1/3/2021 4:48:45 PM ID: bd2f4497-b4dc-4c51-9974-71b86780cff4	DocuSigned by: B113A6B1CFEC4CE... Signature Adoption: Drawn on Device Using IP Address: 160.42.85.12	Sent: 3/1/2022 4:57:51 PM Viewed: 3/2/2022 1:17:23 PM Signed: 3/2/2022 1:17:39 PM

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp
Agent Delivery Events	**Status**	**Timestamp**
Intermediary Delivery Events	**Status**	**Timestamp**
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Carbon Copy Events	**Status**	**Timestamp**
CMS Internal Routing cms.internalrouting@dshs.texas.gov DSHS Contract Management Section Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 3/2/2022 1:17:43 PM
Jennifer Boggs jennifer.boggs@dshs.texas.gov Contract Manager Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 3/2/2022 1:17:44 PM
Beverly Taylor Beverly.Taylor@dshs.texas.gov Contract Manager Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 3/2/2022 1:17:44 PM
Witness Events	**Signature**	**Timestamp**
Notary Events	**Signature**	**Timestamp**

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	2/22/2022 5:00:04 PM
Certified Delivered	Security Checked	3/2/2022 1:17:23 PM
Signing Complete	Security Checked	3/2/2022 1:17:39 PM
Completed	Security Checked	3/2/2022 1:17:44 PM
Payment Events	**Status**	**Timestamps**

Electronic Record and Signature Disclosure

ELECTRONIC RECORD AND SIGNATURE DISCLOSURE

From time to time, DSHS Contract Management Section (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through the DocuSign system. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to this Electronic Record and Signature Disclosure (ERSD), please confirm your agreement by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

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Withdrawing your consent

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. Further, you will no longer be able to use the DocuSign system to receive required notices and consents electronically from us or to sign electronically documents from us.

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Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through the DocuSign system all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

How to contact DSHS Contract Management Section:

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:
To contact us by email send messages to: alison.joffrion@hhsc.state.tx.us

To advise DSHS Contract Management Section of your new email address

To let us know of a change in your email address where we should send notices and disclosures electronically to you, you must send an email message to us at alison.joffrion@hhsc.state.tx.us and in the body of such request you must state: your previous email address, your new email address. We do not require any other information from you to change your email address.

If you created a DocuSign account, you may update it with your new email address through your account preferences.

To request paper copies from DSHS Contract Management Section

To request delivery from us of paper copies of the notices and disclosures previously provided by us to you electronically, you must send us an email to alison.joffrion@hhsc.state.tx.us and in the body of such request you must state your email address, full name, mailing address, and telephone number. We will bill you for any fees at that time, if any.

To withdraw your consent with DSHS Contract Management Section

To inform us that you no longer wish to receive future notices and disclosures in electronic format you may:

i. decline to sign a document from within your signing session, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may;

ii. send us an email to alison.joffrion@hhsc.state.tx.us and in the body of such request you must state your email, full name, mailing address, and telephone number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

Required hardware and software

The minimum system requirements for using the DocuSign system may change over time. The current system requirements are found here: https://support.docusign.com/guides/signer-guide-signing-system-requirements.

Acknowledging your access and consent to receive and sign documents electronically

To confirm to us that you can access this information electronically, which will be similar to other electronic notices and disclosures that we will provide to you, please confirm that you have read this ERSD, and (i) that you are able to print on paper or electronically save this ERSD for your future reference and access; or (ii) that you are able to email this ERSD to an email address where you will be able to print on paper or save it for your future reference and access. Further, if you consent to receiving notices and disclosures exclusively in electronic format as described herein, then select the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

By selecting the check-box next to 'I agree to use electronic records and signatures', you confirm that:

- You can access and read this Electronic Record and Signature Disclosure; and
- You can print on paper this Electronic Record and Signature Disclosure, or save or send this Electronic Record and Disclosure to a location where you can print it, for future reference and access; and
- Until or unless you notify DSHS Contract Management Section as described above, you consent to receive exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you by DSHS Contract Management Section during the course of your relationship with DSHS Contract Management Section.

City Council Meeting

Item Number: 10

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: **RESOLUTION APPROVING THE ISSUANCE OF PERMITS TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") TO DRILL TWO OIL AND GAS WELLS LOCATED IN SECTION 2, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED BETWEEN 1,942 FEET AND 2,032 FEET WEST OF SOUTH LAMESA ROAD AND BETWEEN 165 FEET AND 167 FEET SOUTH OF INTERSTATE 20); AND WAIVING THE REQUIREMENT OF A ROAD REPAIR AGREEMENT (DISTRICT 2) (DEVELOPMENT SERVICES)**

Purpose:

Resolution approving the issuance of permits to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the following oil and gas wells: Rebel #H150SS and Rebel #H160MS; said wells being generally located between 1,942 feet and 2,032 feet west of South Lamesa Road and between 165 feet and 167 feet south of I-20. The required 30-day public comment has passed, and the Council may consider this request. No notices of objection received.

Recommended City Council Action:

Approve

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibit. A 16 ft. sound wall will be used during drilling and completion operations being located on the north side of location. There have been previous permitted

applications near this well pad requiring the same variances. The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

.
(1) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.
(2) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well
(3) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation due to no city water is available.
(4) Permian Deep Rock Oil Company requests variance to the Road Repair Agreement due to no city streets will be used.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris William Jr.

City Manager's Office

RESOLUTION NO. _____

RESOLUTION APPROVING THE ISSUANCE OF PERMITS TO PERMIAN DEEP ROCK OIL CO., LLC ("OPERATOR") TO DRILL TWO OIL AND GAS WELLS LOCATED IN SECTION 2, BLOCK 39, T-2-S, T&P RR CO. SURVEY, CITY OF MIDLAND, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED BETWEEN 1,942 FEET AND 2,032 FEET WEST OF SOUTH LAMESA ROAD AND BETWEEN 165 FEET AND 167 FEET SOUTH OF INTERSTATE 20); AND WAIVING THE REQUIREMENT OF A ROAD REPAIR AGREEMENT

WHEREAS, on December 8, 2009, the City Council of the City of Midland duly approved Ordinance No. 8769 which amended Title VI, "Police Regulations," Chapter 1, "General Offenses," of the City Code of Midland, Texas, so as to establish Section 23, "Oil and Gas Well Permits issued on or after January 1, 2010," which governs the granting or rejecting of Oil and Gas Well Permits; and

WHEREAS, the purpose of said section is to establish reasonable and uniform limitations, safeguards, and regulations for present and future operations related to the exploring, drilling, developing, producing, transporting and storing of oil or gas or other substances produced in association with oil and gas within the City of Midland to protect the health, safety, and general welfare of the public and the orderly development of the City of Midland; abate or prevent potential public nuisances; minimize the potential adverse impact to surface and mineral owners, protect the quality of the environment and encourage the orderly production of available mineral resources; and

WHEREAS, Section 6-1-23(C) of the City Code of Midland, Texas, makes it an offense to knowingly drill or participate in the drilling of any well or to re-enter any well within the corporate limits of the City of Midland without a permit having first been issued by the authority of the City Council; and

WHEREAS, Operator has submitted applications to the City of Midland to drill oil and gas wells on the property described in Section Two hereof; and

WHEREAS, notice of the public hearing on this matter was provided in accordance

with Section 6-1-23(H)(1) and a public hearing was held on June 28, 2022; and

WHEREAS, subsequent to said public hearing, and in accordance with Section 6-1-23(H)(1), the City Council allowed the public and Operator thirty (30) days to submit written input to the City Manager regarding Operator's applications to drill oil and gas wells on the property described in Section Two hereof; and

WHEREAS, the City Council has considered those issues set forth in Section 6-1-23(I) in determining whether to grant or deny permits to Operator to drill oil and gas wells on the property described in Section Two hereof; and

WHEREAS, the City Council finds it to be in the public interest to approve the issuance of permits to Operator to drill oil and gas wells on the property described in Section Two hereof;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the above recitals are hereby adopted and approved by the City Council of the City of Midland.

SECTION TWO. That the Mayor is hereby authorized and directed to execute permits, on behalf of the City of Midland, that will allow Operator to drill the following oil and gas wells:

Rebel #H150SS and Rebel #H160MS;

located in Section 2, Block 39, T-2-S, T&P RR Co. Survey, City of Midland, Midland County, Texas. Said permits shall be in forms substantially similar to those attached hereto as Exhibits "A" and "B" and incorporated herein for all legal purposes.

SECTION THREE. That the requirement of a Road Repair Agreement between Operator and the City of Midland is hereby waived in regard to said permits.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the

City of Midland at a regular meeting on the _____ day of _____, A.D., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on August 9, 2022, considered the application of Permian Deep Rock Oil Co., LLC ("Operator") dated May 2, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Rebel #H150SS oil and gas well shall be 105 feet from the south line and 1,942 feet from the east line, Section 2, Block 39, T-2-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from August 9, 2022 through August 9, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations and use of a workover rig during the completion process directly following the fracing operations.

2. In lieu of constructing a perimeter fence around this permitted well, a perimeter fence around the well pad site may be constructed. Said perimeter fence around the well pad site shall, at a minimum, meet the requirements of Ordinance No. 8769.

3. No landscaping or irrigation is required because City water is not available.

4. No road repair agreement is required because no City streets will be used to access the well site.

Sound walls shall be used during drilling and completion operations as noted in the application.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of August 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of August 2022.

Permian Deep Rock Oil Co., LLC

By: _____

Kyle M. Hammond

General Manager

EXHIBIT "B"

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on August 9, 2022, considered the application of Permian Deep Rock Oil Co., LLC ("Operator") dated May 2, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Rebel #H160MS oil and gas well shall be 107 feet from the south line and 2,032 feet from the east line, Section 2, Block 39, T-2-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

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The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

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OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

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Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

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In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of August 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of August 2022.

Permian Deep Rock Oil Co., LLC

By: _____

Kyle M. Hammond

General Manager

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
05/02/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions within Rebel Unit

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped pastures, service company yards and apartment complex

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Rebel #H150SS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 105' FSL & 1942' FEL,
Section 2 Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Compnay
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

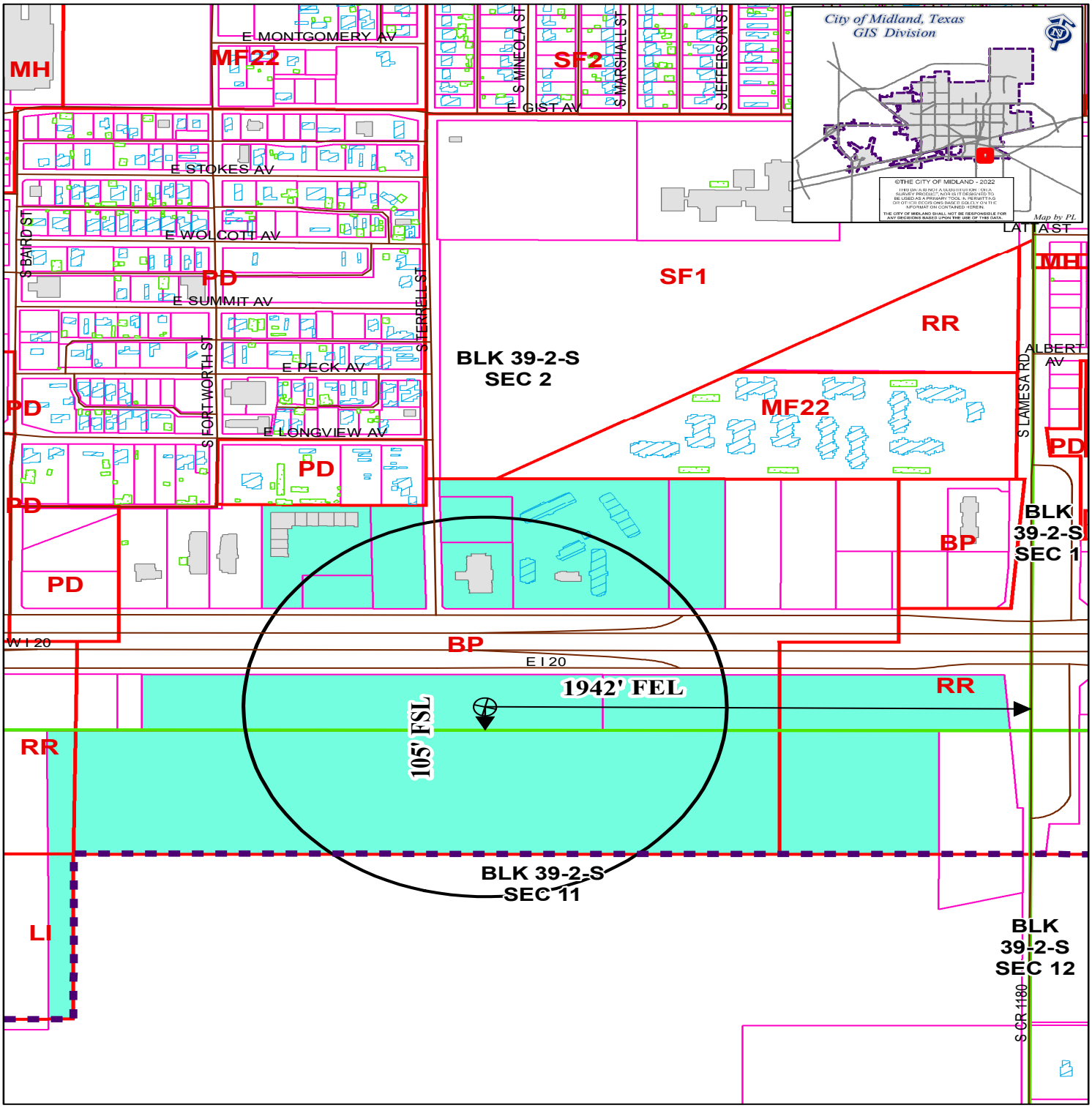
County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Peña
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8



LOCATION AND ZONING MAP

Oil - 043445 - 2022 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 105' FSL and 1,942' FEL, Section 2, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,942 feet west of South Lamesa Road and 167 feet south of I-20.

Rebel #H150SS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

SCALE: 1" = 300'

0' 150' 300'

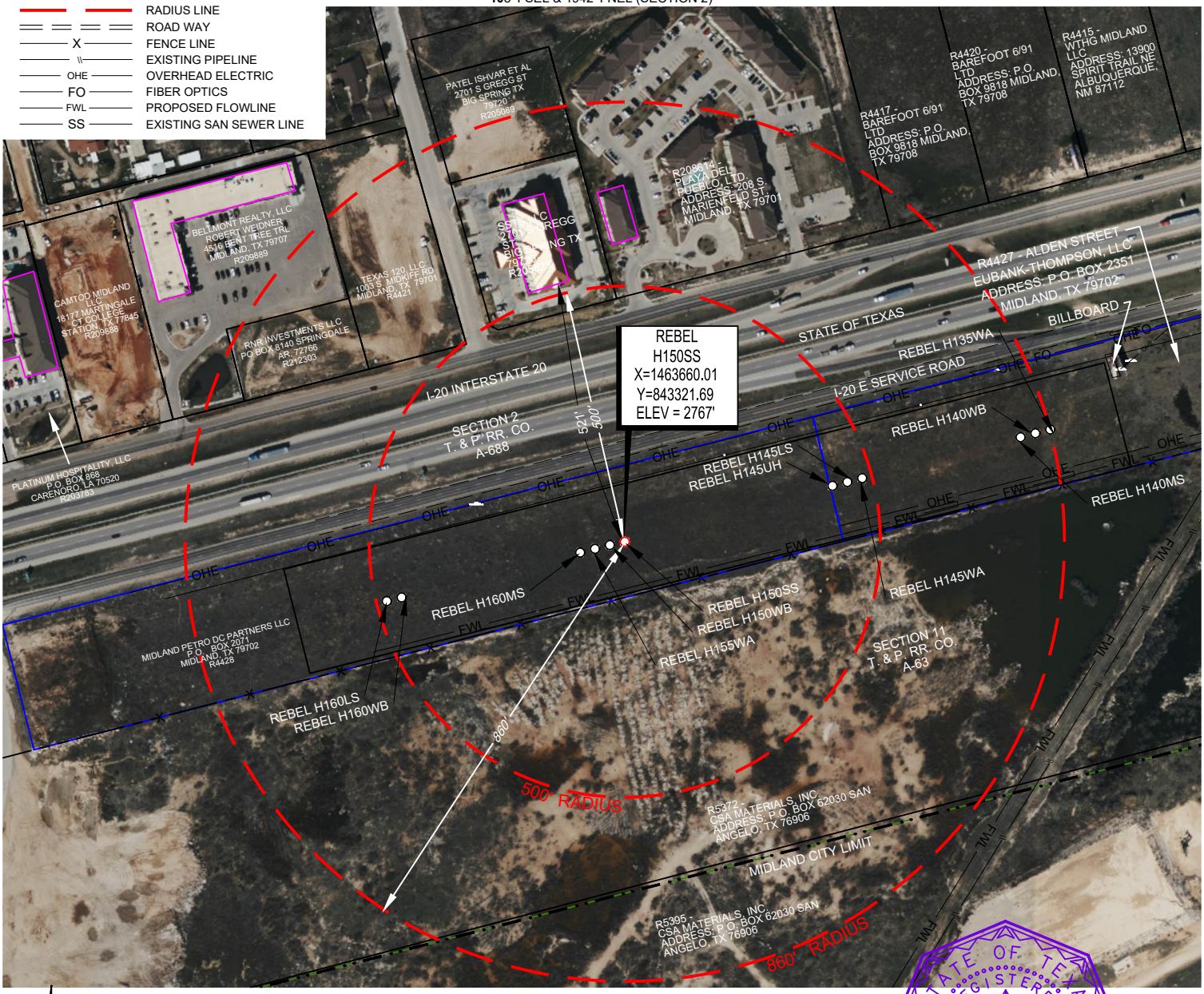
LEGEND

- SURVEY/SECTION LINE
- TRACT BORDER
- RADIUS LINE
- ROAD WAY
- X — FENCE LINE
- \\ — EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- FO — FIBER OPTICS
- FWL — PROPOSED FLOWLINE
- SS — EXISTING SAN SEWER LINE

SECTION 2, T. & P. RR. CO. SURVEY, A-688
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **REBEL H150SS**
105' FSEL & 1942' FNEL (SECTION 2)

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: APRIL 5, 2022

REBEL H150SS	REVISION: INT	DATE
	DRH	03/22/2022
DATE: 03/16/2022	DRH	04/06/2022
FILE: CD_REBEL_H150SS_REV2		
DRAWN BY: DRH		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
4. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

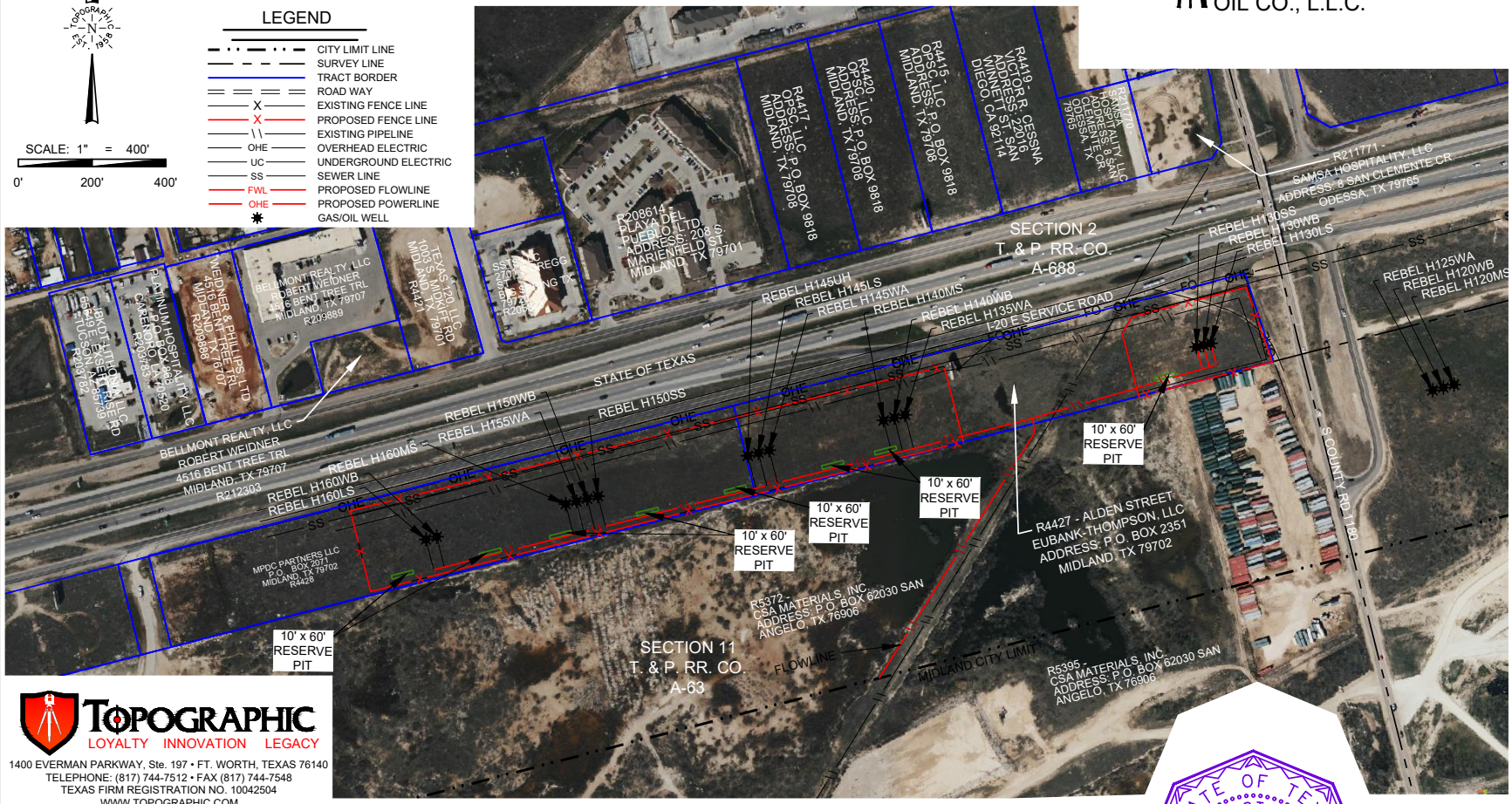
PACKET 10.19 August 9, 2022

S:\SURVEY\ARRINGTON\DP_7B_UNIT\FINAL_PRODUCTS\CITY_PERMITS\CD_REBEL_H150SS_REV2.DWG 4/6/2022 8:52:35 AM dharris

EXHIBIT "G"

SECTION 2, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-688
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



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LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

REBEL UNIT
CITY PERMIT

DATE: 12/07/2021
FILE: SK_REBEL_UNIT_PERMIT_REV5
DRAWN BY: DRH
SHEET : 3 OF 8

REVISION:	
INT	DATE
DRH	12/17/2021
DRH	01/14/2022
DRH	03/07/2022
DRH	04/07/2022
DRH	04/14/2022

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY FOR PROPOSED UTILITIES AND SITES, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY PERMIAN DEEP ROCK OIL CO., L.L.C. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. ALL PROPOSED INFRASTRUCTURE SHOWN HEREON IS SOLELY FOR THE PURPOSE OF APPLYING FOR A PERMIT WITH THE CITY OF MIDLAND, TEXAS. THIS IS EXHIBIT IS NOT TO BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH THE T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THESE ARE FOR PLANNING PURPOSES ONLY.
5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: November 23, 2021

S:\SURVEY\ARRINGTON\DP_7B_UNIT\FINAL_PRODUCTS\SKETCH\SK_REBEL_UNIT_PERMIT_REV5.DWG 4/14/2022 12:36:35 PM dharris

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
05/02/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions within Rebel Unit

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped pastures, service company yards and apartment complex

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Rebel #H160MS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 107' FSL & 2032' FEL,
Section 2 Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Compnay
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

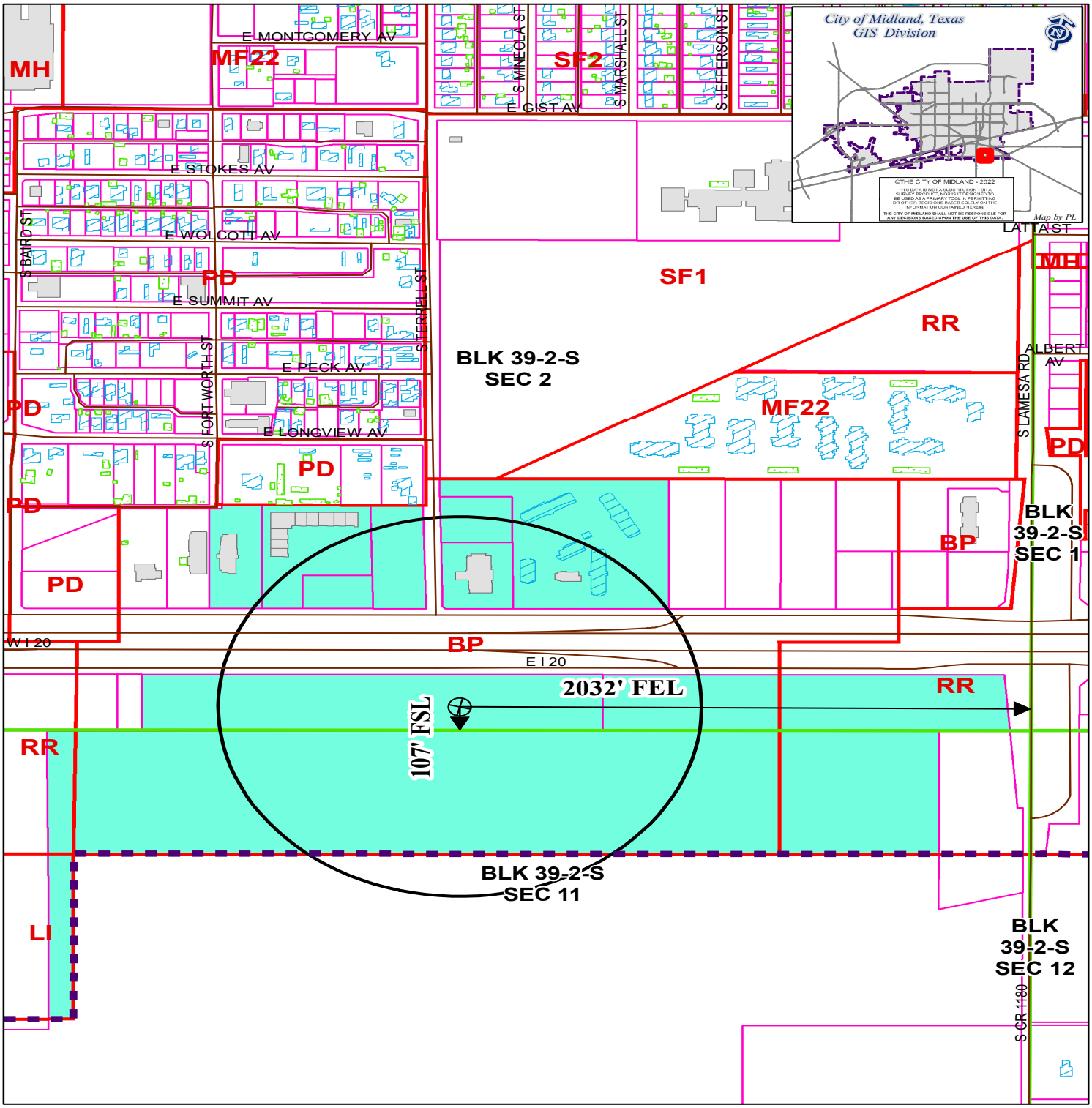
County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Peña
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8



LOCATION AND ZONING MAP

Oil - 043444 - 2022 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 107' FSL and 2,032' FEL, Section 2, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 2,032 feet west of South Lamesa Road and 165 feet south of I-20.

Rebel #H160MS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

SCALE: 1" = 300'

0' 150' 300'

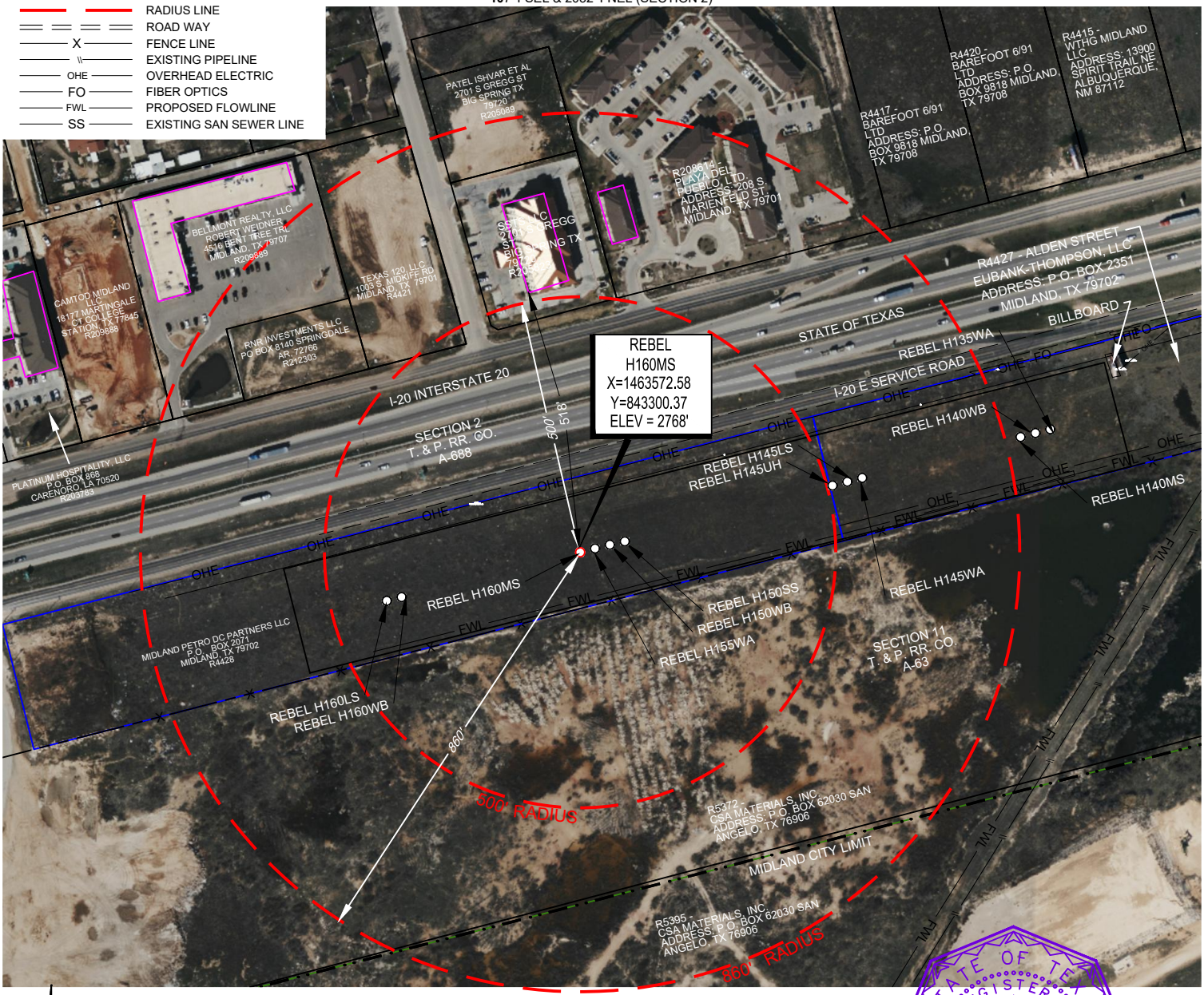
LEGEND

- SURVEY/SECTION LINE
- TRACT BORDER
- RADIUS LINE
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- FO — FIBER OPTICS
- FWL — PROPOSED FLOWLINE
- SS — EXISTING SAN SEWER LINE

SECTION 2, T. & P. RR. CO. SURVEY, A-688
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **REBEL H160MS**
107' FSEL & 2032' FNEL (SECTION 2)

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: APRIL 5, 2022

REBEL H160MS	REVISION: INT	DATE
	DRH	03/16/2022
DATE: 10/10/2018	DRH	04/06/2022
FILE: CD_REBEL_H160MS_REV3		
DRAWN BY: PA		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
4. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

PACKET 10.26 August 9, 2022

OIL AND GAS WELL PERMIT

The City Council of the City of Midland, Texas, at its regular meeting on August 9, 2022, considered the application of Permian Deep Rock Oil Co., LLC ("Operator") dated May 2, 2022, to drill an oil and gas well inside the territorial limits of the City of Midland, Texas. The City Council of the City of Midland, Texas, by appropriate action approved the application and authorized the issuance of this permit.

This documentation hereby constitutes a permit, issued in accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), to drill an oil and gas well as requested in Operator's application that has been filed with the Oil & Gas Compliance Coordinator and is incorporated herein for all legal purposes.

The location of Operator's Rebel #H150SS oil and gas well shall be 105 feet from the south line and 1,942 feet from the east line, Section 2, Block 39, T-2-S, T&P RR Co. Survey, Midland County, Texas. The hole size, casing program, cement program and total depth of that well shall be in strict compliance with the proposed hole size, casing program, cementing program and proposed total depth found in Operator's application. Further, all operations done under this permit shall be done and accomplished in strict accordance with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), which is hereby incorporated into this permit by reference and made applicable hereto with the same force and effect as if the same were copied fully in this permit, including, but not limited to, Subsections (K) through (Z).

This permit shall be effective from August 9, 2022 through August 9, 2023, and so long thereafter as oil or gas is produced, or until such time as Operator has permanently abandoned the operations of the well or facility for which this permit is issued.

The issuance of this permit by the City of Midland does not in any way alter or modify the rights as between the surface estate owner(s) and mineral estate owner(s) if there exists a severance of the surface estate and mineral estate. This permit in no way exempts Operator from its responsibilities or obligations as to third parties. The issuance of this permit only means that Operator has, at this time, complied with Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance No. 8769) and that the Midland City Council, as a regulatory body, will allow Operator to proceed under the conditions of this permit. The issuance of this permit is intended to be only a negative pronouncement that grants no affirmative rights to the permittee to occupy the property. It is expressly provided that this permit does not authorize a trespass by the permittee as to any third party. This

permit does not in any way restrict the use of the surface estate. Securing a permit does not authorize Operator to act with impunity as to third parties, nor does it insulate Operator from the consequences of its actions with regard to those third parties. The receipt of a permit does not undertake to adjudicate property rights.

This permit granted by the City of Midland does not act to immunize Operator from civil tort liability from private parties for actions arising out of the use of the permit. This is because the permit is a "negative pronouncement" that grants no affirmative rights to the permittee. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of State or local law or regulations. Operator has obtained a permit from the City of Midland but the consequences of acting under the permit have not been immunized. The fact that the City of Midland has issued a permit to drill an oil and gas well does not shield Operator from third party tort liability stemming from the consequences of the permitted activity.

NOTWITHSTANDING ANY OTHER PROVISION, OPERATOR HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY OF MIDLAND, CITY OF MIDLAND'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH OPERATOR HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKING CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS OR CITY OF MIDLAND'S NEGLIGENCE.

OPERATOR AGREES TO INDEMNIFY AND HOLD HARMLESS AND DEFEND THE CITY OF MIDLAND, THE CITY'S OFFICERS, AGENTS, AND EMPLOYEES FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE BY OPERATOR UNDER AN OIL AND GAS WELL PERMIT WHERE SUCH INJURIES, DEATH, OR DAMAGES ARE CAUSED BY OPERATOR'S SOLE NEGLIGENCE OR THE JOINT NEGLIGENCE OF THE OPERATOR AND ANY OTHER PERSON OR ENTITY.

A right-of-way license agreement approved by a resolution of the Midland City Council is required for any oil and/or gas flowline or pipeline or any other device associated with a proposed well site that extends into, on, above, in, under, across or through any City rights-of-way, including but not limited to streets, alleys, and utility and drainage rights-of-way.

If the well that is the subject of this permit is not located within the County of Midland, Texas, Operator shall notify the Midland Central Appraisal District of the following: (1) the well's location within the territorial limits of the City of Midland; and (2) that the City of

Midland is to be included as a taxing entity. Operator shall make said notification no later than 60 days after completion of the well.

The Midland City Council, in granting this permit, also grants the following variance(s):

1. Twenty-four hour hydraulic fracturing operations and use of a workover rig during the completion process directly following the fracing operations.

2. In lieu of constructing a perimeter fence around this permitted well, a perimeter fence around the well pad site may be constructed. Said perimeter fence around the well pad site shall, at a minimum, meet the requirements of Ordinance No. 8769.

3. No landscaping or irrigation is required because City water is not available.

4. No road repair agreement is required because no City streets will be used to access the well site.

Sound walls shall be used during drilling and completion operations as noted in the application.

This permit shall constitute a written contract for purposes of insurance requirements.

In addition to the requirements of this permit and the Midland City Code § 6-1-23, "Oil and Gas Well Permits Issued On or After January 1, 2010" (Ordinance 8769), including, but not limited to Subsections (K) through (Z), Operator shall develop, maintain and operate the well described herein in accordance with the conditions, limitations and safeguards contained in Operator's application for said well.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of August 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of August 2022.

Permian Deep Rock Oil Co., LLC

By: _____

Kyle M. Hammond

General Manager

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GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ day of August 2022.

CITY OF MIDLAND, TEXAS

BY: _____

Patrick N. Payton, Mayor

UNDERSTOOD AND AGREE THIS _____day of August 2022.

Permian Deep Rock Oil Co., LLC

By: _____

Kyle M. Hammond

General Manager

City Council Meeting

Item Number: 11

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Charles Harrington, Director of Development Services

Subject: RESOLUTION APPROVING THE FISCAL YEAR 2022-2023 BUDGET FOR THE MIDLAND-ODESSA URBAN TRANSIT DISTRICT (DEVELOPMENT SERVICES) (DISTRICT: ALL)

Purpose:

Approve the 2022-2023 operating budget approved by the MOUTD Board

Recommended City Council Action:

Approve

Fiscal Impact:

$600,000 will be available in the 2023 Operating Budget of the Non-Departmental Division of the General Fund.

Discussion:

Per the Charter for the Midland-Odessa Urban Transit District, the MOUTD Board is required to submit to the City Councils of Midland and Odessa for approval the proposed budget each fiscal year. Attached is that budget that was approved July 27, 2022. The budget requires a contribution of $600,000 from Midland for the next fiscal year. This is the same contribution that has bee required since fiscal 2020.

Morris Williams Jr.

RESOLUTION NO. _____

RESOLUTION APPROVING THE FISCAL YEAR 2022-2023 BUDGET FOR THE MIDLAND-ODESSA URBAN TRANSIT DISTRICT

WHEREAS, the Midland-Odessa Urban Transit District ("MOUTD") Board of Directors approved a budget for the fiscal year 2022-2023 (the "Budget") on July 27, 2022; and

WHEREAS, MOUTD's bylaws provide that the Budget shall not be effective until it has been approved by the City Councils of the City of Midland and the City of Odessa;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

THAT the Budget, a copy of which is attached hereto as Exhibit "A", is hereby approved.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

MOUTD FY23 BUDGET

		2022 BUDGET	2023 PROJECTED BUDGET	DOLLAR CHANGE	PERCENT CHANGE	COMMENTS
	501 WAGES					
0-010-5010-010	Fixed Route -Operators Wages	$1,295,782	$1,262,623	-$33,159	-2.6%	
0-010-5010-021 + 0-(	Fixed Route Dir/Disp/Sup/Wages	157,375	546,407	389,032	247.2%	Multiple positions moved here from Planning per FTA guidelines
0-011-5010-010	Para Operator's Wages	282,094	371,888	89,794	31.8%	Expanded service; added two employees
0-011-5010-020	Para Dir/Disp/Supervision Wages	125,293	201,589	76,295	60.9%	Salaries no longer partially allocated; Mobiitiy Mgr position added
0-025-5010-020	Planning Wages	495,791	87,920	(407,871)	-82.3%	Multiple positions moved to FR per FTA guidelines
0-041-5010-022	PM Director	107,900	92,820	(15,080)	-14.0%	Previously included other splits
0-041-5010-023	PM Mechanics and Bus Washers	407,463	496,391	88,928	21.8%	Includes PM Servicers wages
0-041-5010-024	PM Servicers	120,646	-	-	0.0%	Moved to PM Mechanics and Bus Washers
0-042-5010-024	PM Building Maintenance Wages	81,769	92,231	10,462	12.8%	Adjustment made based on PY actuals
	501 WAGES Total	**$3,074,113**	**$3,151,868**	**$198,402**	**6.5%**	**TOTAL WAGE DIFFERENCES**
	502 FRINGE BENEFITS					
0-000-5020-010 + 0-(	Fixed Route Payroll Taxes	$132,495	$168,518	$36,023	27.2%	Multiple positions moved here from Planning
0-000-5020-020 + 0-(	Fixed Route 401(K)	19,796	49,126	29,330	148.2%	Higher subscription rate
0-000-5020-030 + 0-(	Fixed Route Health Insurance	291,845	284,535	(7,310)	-2.5%	Adjustment made based on PY actuals
0-000-5020-080	Operations Workmen's Comp	69,919	69,919	-	0.0%	
0-000-5020-090	Fixed Route Incentive Wage Expense	56,184	50,911	(5,272)	-9.4%	Adjustment made based on PY actuals
0-011-5020-010	Para Payroll Taxes	39,041	49,593	10,552	27.0%	Change in acccordance with wage increase/decrease
0-011-5020-020	Para 401k	4,744	19,698	14,954	315.2%	Higher subscription rate
0-011-5020-030	Para Health Insurance	78,604	99,972	21,368	27.2%	More Para drivers compared to PY
0-011-5020-090	Para Incentive	19,591	17,267	(2,324)	-11.9%	Adjustment made based on PY actuals
0-025-5020-000	Planning Payroll Taxes	45,243	7,825	(37,418)	-82.7%	Change in acccordance with wage increase/decrease
0-025-5020-020	Planning 401K	10,698	2,638	(8,061)	-75.3%	
0-025-5020-030	Planning Health Insurance	57,591	7,690	(49,901)	-86.6%	Fewer Planning employees
0-025-5020-080	Planning Workmen's Comp	13,601	13,601	-	0.0%	
0-025-5020-090	Planning Incentive	6,752	-	(6,752)	-100.0%	Fewer eligible Planning employees
0-025-5020-092	Planning CPE/Tuition Reimbursement	-	-	-	0.0%	Combined into Training expense
0-041-5020-110	PM CPE/Tuition Reimbursement	-	-	-	0.0%	Combined into Training expense
0-041-5020-010	PM- Payroll Taxes	66,301	63,268	(3,033)	-4.6%	Change in acccordance with wage increase/decrease
0-041-5020-020	PM 401K	16,182	19,319	3,137	19.4%	Higher subscription rate
0-041-5020-030	PM Health Insurance	101,173	92,282	(8,891)	-8.8%	Adjustment made based on PY actuals
0-041-5020-080	PM Workmen's Comp	12,480	12,480	-	0.0%	
0-041-5020-090	PM Incentive	24,395	29,431	5,036	20.6%	Adjustment made based on PY actuals
0-010-5020-130	Driver Uniforms	12,330	11,637	(693)	-5.6%	
0-041-5020-130	PM Uniforms	18,194	18,558	364	2.0%	
	502 FRINGE BENEFITS Total	**$1,097,159**	**$1,088,268**	**-$8,891**	**-0.8%**	**TOTAL FRINGE DIFFERENCES**

		2022 BUDGET	2023 PROJECTED BUDGET	DOLLAR CHANGE	PERCENT CHANGE	COMMENTS
	503 SERVICES					
0-010-5030-030	Fixed Route Prof/Tech Services	$169,008	$323,993	$154,985	91.7%	Exp. previously booked to Admin now here (Runbiz, Transloc)
0-011-5030-030	Para Prof/Tech Services	14,476	50,878	36,402	251.5%	Ecolane invoice $20k previously charged to FR; belongs here
0-025-5030-000	Planning Prof /Tech Services	122,321	-	(122,321)	-100.0%	Moved expenses to Fixed Route per FTA guidelines
0-025-5030-010	Planning McDonald Contract	135,538	140,960	5,422	4.0%	RATP Dev contract
0-041-5030-030	PM Prof/Services	125,263	102,215	(23,048)	-18.4%	More work performed in-house
0-042-5030-030	BLDG MNT Prof/Tech Services	132,441	135,089	2,649	2.0%	Increased facilities costs (inspections, etc)
	503 SERVICES Total	**$699,046**	**$753,135**	**$54,088**	**7.7%**	**TOTAL SERVICE DIFFERENCES**
	504 MATERIALS & SUPPLIES					
0-010-5040-010	Fixed Route Fuel - Buses	$298,640	$471,035	$172,395	57.7%	Increasing fuel prices; increased routes
	Fixed Route Fuel - Support Vehicles	-	-	-	0.0%	Allocated to PM Fuel Support Vehicles
0-010-5040-990	Fixed Route Materials and Supplies	11,600	24,590	12,990	112.0%	Tablets; Training materials; Holiday items
0-011-5040-010	Para Fuel	74,370	114,851	40,481	54.4%	Increased ridership
0-011-5040-990	Para Materials and Supplies	3,700	5,650	1,950	52.7%	Shirts/Hats/Jackets; Supervisor lunches; Greyhound supplies
0-041-5040-010	PM Fuel Support Vehicles	8,280	15,972	7,692	92.9%	Adjustment made based on PY actuals
0-041-5040-020	Tires & Tubes -	35,977	36,697	720	2.0%	
0-041-5040-990	PM Materials & Supplies Parts	337,080	382,321	45,242	13.4%	
0-042-5040-990	Bldg Maint Materials & Supp	105,160	85,811	(19,349)	-18.4%	Adjustment made based on PY actuals
0-025-5040-990	Planning Material and Supplies	10,367	19,647	9,281	89.5%	Safety materials; Employee appreciation items
				-		
	504 MATERIALS & SUPPLIES Total	**$885,173**	**$1,156,574**	**$271,401**	**30.7%**	**TOTAL MATERIAL AND SUPPLY DIFFERENCES**
	505 UTILITIES					
0-160-5050-030	Telephone & Internet - Admin/Planning	$8,542	$8,969	$427	5.0%	
0-160-5050-020	Admin/Planning Utilities	21,437	27,835	6,399	29.8%	
0-015-5050-020	Greyhound Utilities	3,573	-	(3,573)	-100.0%	Greyhound office closure; moved expenses to Administration
0-041-5050-020	PM Utilities	17,864	27,835	9,972	55.8%	Additional utilities for new annex building
0-041-5050-030	PM Telephone	8,542	8,969	427	5.0%	
	505 UTILITIES Total	**$59,957**	**$73,609**	**$13,652**	**22.8%**	**TOTAL UTILITY DIFFERENCES**
	506 INSURANCE & AUDIT					
0-041-5060-030	PM Fleet Ins and Comp Auto	$410,000	$360,000	-$50,000	-12.2%	Projected auto claims
0-160-5060-050	Gen Liab and Officer	30,000	30,000	-	0.0%	Errors & Omissions and Excess Liability Ins (RTS)
0-160-5060-020	Planning Audits	25,000	-	(25,000)	-100.0%	Moved to Operations
				-		
	506 INSURANCE AND AUDIT Total	**$465,000**	**$390,000**	**-$75,000**	**-16.1%**	**TOTAL CASUALTY AND LIABILITY DIFFERENCES**

		2022 BUDGET	2023 PROJECTED BUDGET	DOLLAR CHANGE	PERCENT CHANGE	COMMENTS
	509 MISCELLANEOUS EXPENSE					
0-025-5090-020	Planning Travel and Training	$13,800	$15,927	$2,127	15.4%	SHRM training/conference; Safety training
0-041-5090-020	PM Travel and Training	2,500	2,500	-	0.0%	ASE BUS certification training
0-011-5090-020	Para Travel & Meetings T/S -	-	11,475	11,475	0.0%	TAPTCO 2020 Training Course; CSR Training
0-010-5090-020	Operations Travel and Training	15,000	6,250	(8,750)	-58.3%	
0-025-5090-992	Board Meeting Expense	7,587	7,738	152	2.0%	
0-025-5090-010 + 0-1	Dues & Subscriptions -	8,833	7,738	(1,095)	-12.4%	
0-041-5090-995	PM Postage	1,224	1,248	24	2.0%	
0-025-5090-995	Planning Postage	1,887	1,925	38	2.0%	
0-011-5090-995	Para Postage	-	-	-	0.0%	
0-160-5090-085	Advertising Other	75,000	75,000	-	0.0%	Advertising campaign
	509 MISCELLANEOUS EXPENSE Total	**$125,831**	**$129,802**	**$3,971**	**3.2%**	
	TOTAL EXPENSES MINUS DEPRECIAT	**$6,406,279**	**$6,743,255**	**$457,623**	**7.1%**	

Midland-Odessa Budget FY 2023
Income and Expenses by Category

	Fixed Route	PM	ADA	PLANNING	Operating Budget	Operating Expenses paid in CIP	Total
Income							
Bus Fares	275,000		-		275,000		275,000
Advertising	25,000				- 25,000		- 25,000
City Support	505,258	415,087	188,572	91,083	1,200,000		1,200,000
State Grant	712,000			-	712,000		712,000
5310 Local					-		-
5310 Grant			40,000		40,000		40,000
5307 Federal Grants	$1,752,287	1,660,349	714,289	364,330	- 4,491,255	-	4,491,255
TOTAL INCOME	**3,269,545**	**2,075,437**	**942,861**	**455,413**	**6,743,255**	**-**	**6,743,255**
Expenses							
Wages	1,809,030	681,442	573,477	87,920	3,151,868	-	3,151,868
Fringe Benefits	634,647	235,337	186,530	31,754	1,088,268	-	1,088,268
Services	298,993	237,304	50,878	140,960	728,135	-	728,135
Insurance & Audit	25,000	360,000	-	30,000	415,000		415,000
Materials & Supplies	495,625	520,800	120,501	19,647	1,156,574	-	1,156,574
Utilities	-	36,804	-	36,804	73,609	-	73,609
Miscellaneous Expense	6,250	3,748	11,475	108,329	129,802	-	129,802
TOTAL EXPENSES	**3,269,545**	**2,075,437**	**942,861**	**455,413**	**6,743,255**	**-**	**6,743,255**
***Deficit (Surplus) or Balanced**	**0**	**-**	**-**	**-**	**0**	**-**	**0**

Midland-Odessa Budget FY 2023							
Employee Count							
			Fixed Route	**PM**	**ADA**	**PLANNING**	**Total**
	Operations						
		Operations Director	1.00				1.00
		Finance Director	1.00				1.00
		HR Director	1.00				1.00
		AP Clerk	1.00				1.00
		Mobility Manager			1.00		1.00
		Safety	1.00				1.00
		Training	1.00				1.00
		Street Supervisor			3.00		3.00
		Customer Service	1.00				1.00
		Scheduler	3.00				3.00
		FT Bus Operators	32.00		9.00		41.00
		PT Bus Operators	-		-		-
	Maintenance						
		Maintenance Director		1.00			1.00
		Mechanic A		6.00			6.00
		Shop Foreman		-			-
		Facilities		2.00			2.00
		Bus Washer		3.00			3.00
	Administration						
		Assistant GM				1.00	1.00
	Greyhound						
		FT Clerk	-				-
		PT Clerk	-				-
Total Employees			**42.00**	**12.00**	**13.00**	**1.00**	**68.00**

Midland-Odessa Budget FY 2023
Wages

	Fixed Route	PM	ADA	PLANNING	Operating Budget	CIP	Total
Bus Operators	1,262,623		371,888		1,634,511		1,634,511
Operations Wages	546,407	-	201,589	0	747,996	0	747,996
Maintenance Wages	-	681,442	-	-	681,442	0	681,442
Administration Wages	0	0	0	87,920	87,920	0	87,920
Total Wages	1,809,030	681,442	573,477	87,920	3,151,868	0	3,151,868

Midland-Odessa Budget FY 2023 Fringe Benefits				Fixed Route	PM	ADA	PLANNING	Operating	CIP	Total
Payroll Taxes										
	Operations			168,518		49,593		218,111		218,111
	Greyhound			0				0		0
	Maintenance				63,268			63,268		63,268
	Administration						7,825	7,825		7,825
				168,518	**63,268**	**49,593**	**7,825**	**289,204**	**0**	**289,204**
Workers Comp				**69,919**	**12,480**		**13,601**	**96,000**	**0**	**96,000**
401K Employer Match										
	Operations			49,126		19,698		68,824		68,824
	Greyhound			0				0		0
	Maintenance				19,319			19,319		19,319
	Administration						2,638	2,638	0	2,638
				49,126	**19,319**	**19,698**	**2,638**	**90,781**	**0**	**90,781**
Incentive/Performance/GM Discretion										
	Operations			50,911		17,267		68,178		68,178
	Greyhound			0				0		0
	Maintenance				29,431			29,431		29,431
	Administration						0	0	0	0
				50,911	**29,431**	**17,267**	**0**	**97,610**	**0**	**97,610**
All Insurance Benefits	**$640.85**									
		FR	Para							
	Operations	42	13	284,535		99,972		384,507		384,507
	Greyhound	0		0				0		0
	Maintenance	12			92,282			92,282		92,282
	Administration	1					7,690	7,690		7,690
				284,535	**92,282**	**99,972**	**7,690**	**484,479**	**0**	**484,479**
Prof Dev/CE/Tuition Reimbursement					**0**		**0**	**0**	**0**	**0**
0-010-502 Uniforms				**11,637**	**18,558**			**30,194**	**0**	**30,194**
Total Fringe Benefits				**634,647**	**235,337**	**186,530**	**31,754**	**1,088,268**	**0**	**1,088,268**

Midland-Odessa Budget FY 2023
Services, Insurance, and Audit

			Fixed Route	PM	ADA	PLANNING	Operating Budget	CIP	Total
Services									
5030-030 (for Plan	Management Contract	$281,919	140,960			140,960	281,919		281,919
									0
5030-030 (for Plann	Professional and Technical Services		158,033	102,215	50,878		311,126		311,126
									0
0-042-5030-030	Bldg Maintenance			135,089			135,089		135,089
									0
5030-030	Marketing						0		0
									0
5030-030	**Total Services**		**298,993**	**237,304**	**50,878**	**140,960**	**728,135**	**-**	**728,135**
Audit									
0-160-5060-020	Audit		25,000				25,000		25,000
	Total Audit		**25,000**	**-**	**-**	**-**	**25,000**	**-**	**25,000**
Insurance									
5060-030	Auto Liability	$360,000		54,000			54,000		54,000
5060-030	Auto Physical Damage			54,000			54,000		54,000
5060-050	Errors & Omissions Liability					30,000	30,000		30,000
5060-030	General Liability			54,000			54,000		54,000
5060-030	Property & Contents			198,000			198,000		198,000
	Total Insurance			**360,000**		**30,000**	**390,000**		**390,000**
Total Services, Audit and Insurance			**323,993**	**597,304**	**50,878**	**170,960**	**1,143,135**	**-**	**1,143,135**

Midland-Odessa Budget FY 2023 **Material & Supplies, Utilities, and Miscellaneous**			**Fixed Route**	**PM**	**PARA**	**PLANNING**	**Total**
Materials & Supplies							
5040-010	Fuel						
		Buses	471,035		114,851		$ 585,887
		Support Vehicles		15,972			$ 15,972
0-041-5040-020	Tires			36,697			$ 36,697
5040-990	Matls/Supplies		24,590	382,321	5,650	19,647	$ 432,208
0-042-5040-990	Building Maint Supplies			85,811			$ 85,811
Total Materials & Supplies			**495,625**	**520,800**	**120,501**	**19,647**	**$ 1,156,574**
Utilities							
5050-020	Electricity/ Water/Sewage			27,835		27,835	55,671
5050-030	Telephone/Internet			8,969		8,969	17,938
Total Utilities			**0**	**36,804**	**0**	**36,804**	**73,609**
Miscellaneous							
5090-995	Postage/Shipping		0	1,248		1,925	3,173
5090-020	Travel and Training		6,250	2,500	11,475	15,927	36,152
5090-010	Dues & Membership					7,738	7,738
5090-085	Advertising Other					75,000	75,000
5090-992	Board/Committees					7,738	7,738
Total Miscellaneous			**6,250**	**3,748**	**11,475**	**108,329**	**129,802**

City Council Meeting

Item Number: 12

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Seth Herman, Police Chief

Subject: RESOLUTION AUTHORIZING THE ISSUANCE OF AN OPERATING CERTIFICATE TO TARA ROSELIND MCCLAIN; SETTING FORTH CONDITIONS ACCOMPANYING THE CERTIFICATE; AND ESTABLISHING THE TERMS OF THE CERTIFICATE (DISTRICT: ALL) (POLICE)

Purpose:

RESOLUTION AUTHORIZING AN OPERATING CERTIFICATE FOR TARA'S GROOVY RIDES TO OPERATE A LIMOUSINE BUSINESS; SETTING FORTH CONDITIONS ACCOMPANYING THE CERTIFICATE; AND ESTABLISHING THE TERMS OF THE CERTIFICATE.

Recommended City Council Action:

Approve

Fiscal Impact:

NONE.

Discussion:

Tara McClain, owner of Tara's Groovy Rides, has filed an application with the City Secretary's Office for the granting of an operating certificate. The applicant has successfully completed the requisite background investigation centering on criminal and driving records conducted by the Midland Police Department. Ms. McClain has furnished all necessary documents related to proof of financial responsibility and has signed a copy of the operating certificate indicating acceptance of the provisions.



City Manager's Office

RESOLUTION NO. _____

RESOLUTION AUTHORIZING THE ISSUANCE OF AN OPERATING CERTIFICATE TO TARA ROSELIND MCCLAIN; SETTING FORTH CONDITIONS ACCOMPANYING THE CERTIFICATE; AND ESTABLISHING THE TERMS OF THE CERTIFICATE

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the City Secretary is hereby authorized and directed to act on behalf of the City of Midland to grant to Tara Roselind McClain an Operating Certificate for a limousine business pursuant to Title V, Chapter 6 of the Midland City Code, the provisions of said certificate to be as set forth in Exhibit A, attached hereto and incorporated herein by reference.

SECTION TWO. Notwithstanding Section One, the City Secretary shall not issue the Operating Certificate set forth above unless and until:

A. Tara Roselind McClain has delivered to the City Secretary a current certificate of insurance indicating compliance with the insurance requirements set forth in Section 5-6-2(F) of the Midland City Code for all motor vehicles to be used as limousines under the Operating Certificate; and

B. Tara Roselind McClain has paid to the City the amount of the annual fee required under Section 5-6-2(G) of the City Code; and

C. Tara Roselind McClain has signed a copy of the Operating Certificate indicating acceptance of the provisions set forth therein.

On motion of Council member _____, seconded by Council member _____, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the _____ day of _____, A.D., 2022, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

_____
Robert Patrick, City Manager

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Seth Herman, Police Chief

APPROVED AS TO FORM ONLY:

_____
John Ohnemiller, City Attorney

CITY OF MIDLAND OPERATING CERTIFICATE FOR LIMOUSINE BUSINESS

THIS OPERATING CERTIFICATE is issued to Tara Roselind McClain ("Operator") whose address is 2612 N. A Street, Midland, TX 79705, pursuant to Title V, Chapter 6 of the Midland City Code, for the purpose of granting to Operator the privilege of operating a limousine business along, across, and over the public streets of the City of Midland, Texas, now laid out or dedicated, and all extensions thereof, subject to the following provisions and conditions:

1. Business Name: The limousine business operated pursuant to this certificate shall be in the name of Tara Roselind McClain.

2. Term: This certificate shall be valid and in effect for five (5) years from the date of issuance indicated below, subject to earlier termination as set forth in the Midland City Code.

3. Suspension of Certificate for Non-Payment: This certificate shall be automatically suspended on March 1 of any year during the term of this certificate if Operator has not paid the annual fee required by Section 5-6-2(G) of the Midland City Code when due, and shall remain suspended until the annual fee is paid.

4. Compliance With All Laws: Operator must at all times operate the above-named limousine business in compliance with all applicable federal, state, and local laws, regulations, and ordinances, including, but not limited to, Title V, Chapter 6 and Title XIII, Chapter 2 of the Midland City Code, as amended from time to time, and this certificate may be revoked by the Midland City Council at any time for Operator's non-compliance with said laws, regulations, or ordinances.

5. Assignability and Transferability: This certificate is personal to the Operator named above and may not be assigned by sale or otherwise to any other person or entity. Any attempt to assign this certificate or any interest in this certificate shall be void and will serve as grounds for termination of this certificate by the City.

6. Airport Privileges: This certificate grants to the Operator the privilege of operating at Midland International Airport, provided that such operations shall not be permitted until Operator has complied with Section 5-6-8 of the Midland City Code.

ISSUED THIS _____ DAY OF _____, 2022.

_____
Amy M. Turner, City Secretary
City of Midland, Texas

ACCEPTANCE

The Operator herein named accepts this Operating Certificate and agrees to abide by all its provisions and all applicable federal, state, and local laws, ordinances, and regulations, including, but not limited to, applicable provisions of the Midland City Code, as amended, and the regulations governing the charging of fares between the City of Midland and the City of Odessa.

Name:_____ Date:_____

TAXI/LIMO OPERATING CERTIFICATE

APPLICATION CHECKLIST

Date Submitted	7/6/2022	
Name of Applicant	Tara McClain	
Application Complete?	Yes	No
Attachments Complete?	Yes	No
Copy of current lease or affidavit to ownership and occupancy	Yes	No
Application verified by City Secretary's Office:	Initials Here T. S.	
Certificate of Insurance included? ***(5-6-2(F) 3)**	Yes	No
Certificate of Insurance reviewed by Legal?	Approved	Disapproved
Original Application sent to Chief of Police by the City Secretary's Office?	Date Sent: 7/6/2022	
Reviewed by Chief of Police?	Approved:	Disapproved
On file with City Secretary Office 15 days prior to Council Meeting ***(5-6-2(B))**	Yes	No
Date Application went to Council		
Results	Approved	Rejected

References from Ordinance No. 9577

Following review Please return to:

Jamie R. Lopez
City Secretary's Office

City Hall Room 330

For questions please call:

432-685-7559

CITY OF MIDLAND

APPLICATION FOR OPERATING CERTIFICATE FOR LIMOUSINE BUSINESS

The City of Midland reserves the right to deny this application and to require additional information as needed.

Please print in **black ink or type**:

1. Applicant Information:

   a. Name (complete): Tara McClain
   Permanent Address: 2612 N. "A" Street
   Mailing Address: 2612 N. "A" Street
   City Midland State TX Zip 79705
   Phone: 432-210-1401

   b. Is this application filed by a partnership? Yes _____ No ✓
   If Yes, list all partners' names, addresses and phone numbers:

Name	Address	Phone

   c. Is this application filed by a corporation? Yes ___ No ✓
   If Yes, list the name and location of its principal place of business:

   Attach a list of the names and addresses of all officers, directors and stockholders in the corporation.

   d. List all persons with an interest in this limousine business:

Name	Address	Occupation
N/A		

2. Limousine Business Information:
   a. Headquarters Address: 2612 N. "A" Street Midland, TX 79705
   Headquarters Phone: 432-210-1401

   b. Location and Description of Additional Limousine Stands:

   c. Trade Name: Tara's Groovy Rides

   d. Color Scheme: Grey

e. Description of each limousine:

Year	Make	Model	Cab #	Owner	Leased?
2019	Nissan	Altima		Tara McClain	NO

3. Do you currently operate or have an interest in any limousine business other than Midland? If yes, provide complete information concerning same. I operate outside of Midland

4. Please outline below your program and requirements to test employees to determine use of illegal drugs? (Minimum requirement: Test 50% of employees and 50% of contract drivers at least once a year.)

N/A

5. The following should be attached and made a part of this application:

Attachment A: financial statement of applicant and for all partners or corporation.

Attachment B: statement of assets and liabilities dedicated to limousine business.

Attachment C: liability insurance certificate to be approved by City Attorney's office.

Attachment D: applicants must supply a copy of their corporate charter or a copy of the corporation's certificate from the Texas Secretary of State indicating authority to conduct business in the State of Texas.

Attachment E: applicant's experience record.

Attachment F: City chauffeur's license application information.

6. Affidavit

I hereby swear or affirm that the information on this application and the attachments to same are true and correct to the best of my knowledge.

Tara McClain
Applicant's signature

Subscribed and sworn to before me by the said
this the 6th day of July, 2022, to certify which witness my hand and seal of office.

Tiere Strambler
Notary Public

NOTARY PUBLIC STATE OF TEXAS
Tiere Strambler
MY COMMISSION EXPIRES
10/13/2025
NOTARY ID: 133388056

PLEASE BE ADVISED THAT CRIMINAL RECORDS OF ALL APPLICANTS WILL BE CHECKED PURSUANT TO TEX. REV. CIV. STAT. ANN. ART. 6252-13c (VERNON SUPP. 1998)

Return completed application and attachments to:

City Secretary's Office
300 N. Loraine, Room 340
Midland, Texas 79701

Attachment A

FINANCIAL STATEMENT

The following is a financial statement for Tara McClain, an applicant for a limousine operating certificate in the application attached. This constitutes a full disclosure of my financial status. (Attach additional pages if necessary.)

ASSETS	LIABILITIES
REAL ESTATE	
AUTOMOBILES	
	2019 Nissan Altima
	2013 Kia Soul (not in use)
PERSONAL AND HOUSEHOLD GOODS	
CASH	
	0
SECURITIES, STOCKS, OTHER INVESTMENTS	
OTHER	

Tara McClain
Applicant

Attachment B

ASSETS AND LIABILITIES DEDICATED TO LIMOUSINEBUSINESS

I, Tara McClain, the applicant for an operating certificate in the attached application hereby designate the following of my assets and liabilities as being dedicated to the limousine business for which I seek an operating certificate. The following represents a full disclosure of my financial commitment to that limousinebusiness.

ASSETS	LIABILITIES
REAL ESTATE	
AUTOMOBILES	
2019 Nissan Altima	
2013 Kia Soul (not in use)	
PERSONAL AND HOUSEHOLD GOODS	
CASH	
SECURITIES, STOCKS, OTHER INVESTMENTS	
OTHER	

Dana McClain
Applicant

Attachment C

INSURANCE COVERAGE

A Certificate of Insurance listing coverage and each vehicle covered shall be filed with this application as set forth in City Code 5-6-2(F).

Coverage shall be:

(a) not less than twenty thousand dollars ($20,000.00) for bodily injury or death in any one accident;

(b) not less than forty thousand dollars ($40,000.00) because of injury or death of two (2) or more persons in any one accident;

(c) not less than fifteen thousand dollars ($15,000.00) for property damage;

(d) not less than two thousand dollars ($2,000.00) for personal injury protection for passengers; and

(e) include uninsured motorists coverage in the same amounts as required for liability coverage.

Attachment D

CORPORATE CHARTER OR CERTIFICATE

Corporate applicants must supply a copy of their Corporate Charter or a copy of the corporation's certificate from the Texas Secretary of State indicating the corporation's authority to conduct business in the State of Texas. Please attach as Attachment D.

Amended auto policy declarations

Platinum Gold Standard Value Plan

Allstate.

Your policy effective date is April 30, 2022

Total Premium for the Policy Period

Please review your insured vehicles and verify their VINs are correct.

Vehicles covered	*Identification Number (VIN)*	*Premium*
2019 Nissan Altima	1N4BL4CV9KC140182	$620.95
2016 Nissan Versa	3N1CN7AP4GL825090	1,205.39
Motor Vehicle Crime Prevention Authority Fee		4.00
Recoupment Fee Volunteer Rural Fire Department Assistance Program		0.78
Additional coverages		
Total*		**$1,831.12**

**** Your bill will be mailed separately. Before making a payment, please refer to your latest bill, which includes payment options and installment fee information. If you do not pay in full, you will be charged an installment fee(s).***

The autos or trailers described in this policy are principally garaged at the address of the named insured unless otherwise stated.

Discounts (included in your total premium)

Passive Restraint
Premier
Allstate eSmart®
Premier Plus
Antilock Brakes
Early Signing
Anti-theft

Discounts per vehicle

2019 Nissan Altima

Passive Restraint
Premier
Allstate eSmart®
Antilock Brakes
Early Signing

2016 Nissan Versa

Anti-theft
Antilock Brakes
Early Signing
Passive Restraint
Premier Plus
Allstate eSmart®

Listed drivers on your policy*

Tara McClain - Single driver, age 47
Thomas Collignon - Single driver, age 28
**The drivers named are currently listed on your policy. If there are any other drivers in your household, please contact your agent or producer of record to have your policy updated.*

Excluded drivers from your policy

None

Information as of July 14, 2022

Summary

Named Insured(s)
Tara McClain
Mailing address
611 E Interstate 20 Apt C208
Midland TX 79701-2035
Policy number
844 530 679
Your policy provided by
Allstate Fire and Casualty Insurance Company
Policy period
Beginning **April 30, 2022** through **October 31, 2022** at 12:01 a.m. standard time
at the address of the named insured stated herein
Your policy change is effective
July 22, 2022
Your Allstate agency is
Bill Eggar
4400 N Midland #402
Midland TX 79707
(432) 697-0090
WILLIAMEGGAR3@ALLSTATE.COM

Some or all of the information on your Policy Declarations is used in the rating of your policy or it could affect your eligibility for certain coverages. Please notify us immediately if you believe that any information on your Policy Declarations is incorrect. We will make corrections once you have notified us, and any resulting rate adjustments, will be made only for the current policy period or for future policy periods. Please also notify us immediately if you believe any coverages are not listed or are inaccurately listed.

TX310AMD

Coverage detail for 2019 Nissan Altima

Coverage	*Limits*	*Deductible*	*Premium*
Liability			
• Bodily Injury	$50,000 each person $100,000 each occurrence	Not applicable	$211.93
• Property Damage	$100,000 each occurrence	Not applicable	$218.33
Auto Comprehensive Insurance	**Not purchased***		
Collision	**Not purchased***		
Collision for Custom Equipment	**Not purchased***		
Comprehensive for Custom Equipment	**Not purchased***		
Roadside Coverage	$120	Not applicable	$7.05
Transportation Expense	**Not purchased***		
Uninsured/Underinsured Motorists			$112.27
• Bodily Injury	$50,000 each person $100,000 each accident	Not applicable	
• Property Damage	$100,000 each accident	$250	
Auto Replacement Protection	**Not purchased***		
Automobile Medical Payments	**Not purchased***		
Personal Injury Protection	$2,500 each person	Not applicable	$71.37
Portable Electronics and Media	**Not purchased***		
Sound System	**Not purchased***		
Total premium for 2019 Nissan Altima			**$620.95**

*** This coverage can provide you with valuable protection. To help you stay current with your insurance needs, contact your Allstate agent to discuss coverage options and other products and services that can help protect you.**

VIN 1N4BL4CV9KC140182

Rating information

- Your policy premium could be lower if you own a residential property such as a house, condominium, or mobilehome. If you do own a residential property, please contact your agent or producer of record to have your policy updated.
- The rating information for this vehicle is: unmarried female age 47
- This vehicle is driven between 6,000 and 7,999 miles per year.

TX310AMD

027 010 042
220715A306455
AUTR16TX20220715035405O1A-000046-003-0-00-00

Allstate.

Coverage detail for 2016 Nissan Versa

Coverage	*Limits*	*Deductible*	*Premium*
Liability			
• Bodily Injury	$50,000 each person $100,000 each occurrence	Not applicable	$190.31
• Property Damage	$100,000 each occurrence	Not applicable	$228.56
Auto Collision Insurance	Actual cash value	$1,000	$439.66
Auto Comprehensive Insurance	Actual cash value	$1,000	$178.54
Collision for Custom Equipment	**Not purchased***		
Comprehensive for Custom Equipment	**Not purchased***		
Roadside Coverage	$120	Not applicable	$7.05
Transportation Expense	**Not purchased***		
Uninsured/Underinsured Motorists			$101.56
• Bodily Injury	$50,000 each person $100,000 each accident	Not applicable	
• Property Damage	$100,000 each accident	$250	
Auto Replacement Protection	**Not purchased***		
Automobile Medical Payments	**Not purchased***		
Personal Injury Protection	$2,500 each person	Not applicable	$59.71
Portable Electronics and Media	**Not purchased***		
Sound System	**Not purchased***		
Total premium for 2016 Nissan Versa			**$1,205.39**

*** This coverage can provide you with valuable protection. To help you stay current with your insurance needs, contact your Allstate agent to discuss coverage options and other products and services that can help protect you.**

VIN 3N1CN7AP4GL825090

Lienholder
Exeter Finance Corp

Rating information

- Your policy premium could be lower if you own a residential property such as a house, condominium, or mobilehome. If you do own a residential property, please contact your agent or producer of record to have your policy updated.
- The rating information for this vehicle is: for pleasure, unmarried male age 28
- This vehicle is driven between 8,000 and 9,999 miles per year.

TX310AMD

Additional coverage

The following policy coverage is also provided.

Coverage	*Limits*	*Deductible*	*Premium*
Automobile Death Indemnity Insurance	$10,000 benefit	Not applicable	Included
Total			**$0.00**

Your policy documents

Your automobile policy consists of this Policy Declarations and the documents in the following list. Please keep these together.

- Allstate Auto Policy - ACR135
- Claim Satisfaction Guarantee Amendatory Endorsement - AP4961
- Drivewise® Enrollment Endorsement - AU14737
- Texas Motor Vehicle Crime Prevention Authority Endorsement - AU14916
- TX Personal Injury Protection Endorsement - ACR136
- TX Uninsured/Underinsured Motorists Amendatory Endorsement - ACR137
- Automobile Death Indemnity Insurance - Coverage CM - ACR138
- TX Bundling Benefits Endorsement - ACR139
- Texas Amendatory Endorsement - ACR310

Important payment and coverage information

Here is some additional, helpful information related to your coverage and paying your bill:

▶Drive safely for 6 months to qualify for a Drivewise® cash reward.

▶We agree to make available to you an installment payment plan as described in Rule 14 of the Texas Automobile Rules and Rating Manual, except when an installment payment plan is prohibited by other rule or by statute.

Allstate Fire and Casualty Insurance Company's Secretary and President have signed this policy with legal authority at Northbrook, Illinois.

Julie Parsons
Julie Parsons
President

Susan L Lees
Susan L. Lees
Secretary

TX310AMD

027 010 042
220715A306455
AUTR16TX20220715035405O1A-000046-004-0-00-00

Attachment E

EXPERIENCE RECORD

I, Tara McClain, the applicant for a limousine operating certificate in the attached application, have the following experience record in relation to limousineand other commercial transportation:

Company Name and Address	Dates of Service	Position with Company
Tara's Groovy Rides LLC.	Oct 8, 2021	Owner

Total number of years driving a taxicab:

How long have you held a driver's license? 31 years Date of Birth: 07/25/1974

Provide information below for States in which you have held a Driver's License:

State of Issuance	Dates Held	Type	Driver's License Number
TX	16yrs old	ClassC	11113924
NH	2000	ClassC	?
TX	2002	ClassC	11113924

Describe any accident with a motor vehicle which you have had in the last ten years. Specific responsibility for the accident, any property damaged and the extent of any injuries suffered by any person involved:

Other Comments:

Dara McClain
Applicant

Attachment F
CITY CHAUFFEUR'S LICENSE

Full Name (including Maiden): Tara Roselind McClain
Address: 2612 N. "A" Street Midland, TX 79705 Phone: 432-210-1401
Business Address: Same Phone:
Birth Place: Lubbock, TX Birth Date: _____ Age:
Race: W Sex: F Hgt 5'2 Wgt: 200 Hair: Dark Brown Eyes: Hazel Complexion: Very Light White
List any body or facial marks/defects: _____
Length of Residence: Midland _____ State _____ U.S. Citizen? (Yes) or No: most of my life
Driving Experience-Number of Years: 31 Social Security #: 521-43-8788

TX DRIVERS LICENSE #: 11113924

LIMOUSINE COMPANY YOU ARE WORKING FOR:
Name of Limousine Company: _____
Limousine Company Address: _____
Physician Name: _____
Physician Address: _____ Phone #: _____

HAVE YOU EVER BEEN ARRESTED? Yes ✓ No _____
CA DV IT WAS A whole situation (self defense, but I was the only one arrested)
List the charge(s) whether or not you know the date and/or disposition, and whether or not you were convicted: (Do not list traffic violations here.)

Place Arrested	Date	Charge	Disposition
Ridgecrest, CA	62/2002	DV	Eventually dropped

(List additional arrests on the back of this sheet.)

If convicted of a criminal offense, you may attach any recommendations from authorities regarding your record of good conduct.

List all traffic violations you have received (if any):

Place	Date	Charge	Disposition
Monahans	11/2019	failure to dim lights	fine
Alpine	04/2021	driving in left lane	warning ticket

(List additional traffic violations on the back of this sheet.)

Any omission will result in a denial of this application. This information is true and correct to the best of my knowledge.

Signed: Tara McClain
Dated: 07/06/2022

City Council Meeting

Item Number: 13

Meeting Date: August 9, 2022 (July 26, 2022)

To: City Council / City Manager

From: Landon Ochoa, Planner

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE A 0.16-ACRE TRACT OF LAND OUT OF THE SOUTHEAST QUARTER OF BLOCK 21, HOMESTEAD ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE WEST SIDE OF NORTH MINEOLA STREET, APPROXIMATELY 92 FEET NORTH OF EAST MICHIGAN AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 2) (DEVELOPMENT SERVICES)

Purpose:

The applicant, Davis Laabs, is requesting a zone change from MF-22, Multiple Family Dwelling District to SF-3 Single Family Dwelling District at 603 N. Mineola Street to allow for the construction of a residential home.

Recommended City Council Action:

Approve

Fiscal Impact:

This request does not require any City funds.

Discussion:

Current Zoning:

MF-22, Multiple-Family Dwelling District.

Surrounding Zoning and Land Use:

The properties to the north, east west and south are zoned MF-22, Multiple-Family Dwelling District, and is the location of a single-family home and vacant land.

Analysis:

The applicant is requesting to rezone the property from MF-22, Multiple-Family Dwelling District to SF-3, Single-Family Dwelling District, to allow for the construction of a residential home. The property meets the minimum lot size requirements for the SF-3, Single Family Dwelling District. Under the previous zoning code, the current zoning district would have allowed for construction of single-family homes, which allowed for the proliferation of their construction in this area. Under the new Zoning Code adopted in 2019, residential uses became more specified to single family zoning district.

This proposed zone change has been circulated to the respective City departments for internal review and their comments, conditions, and requirements are as follows:

Fire: (Approved)

No objections to zone change request.

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2020 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary. Code versions are subject to change depending on time of new code edition adoption in the City of Midland and date of permit application.

Engineering: (Approved)

No objections to zone change. [For the Applicant's information only.]

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations.[For the Applicant's information only.]

Code: (Approved)

No Oil and Gas issues.

Transportation: (Approved)

No additions or changes to site access are approved with plat or zoning review. Driveways or other access points are approved only with construction drawing review. [For the Applicant's

information only.]

No objections to plat. [For the Applicant's information only.]

Planning:

This request is in compliance with the Tall City Tomorrow Comprehensive Plan, Chapter 3 An Integrated Land Use Vision, "Future Land Use Map" as it designates this area for Urban Residential, a classification which calls for single family detached housing.

This request was approved at the July 5, 2022, Planning and Zoning Commission meeting.

Staff recommends approval of this zone change from MF-22, Multiple Family Dwelling District to SF-3, Single Family Dwelling District, subject to condition A.

Conditions:

A. That the use and development of this property shall conform to the regulations of the SF-3, Single-Family Dwelling District.

Letters of Objection:

Staff has not received any letters of objection as of July 21, 2022.

Attachments:

Application
Maps
Metes and Bounds
Floor Plan

Morris William Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE A 0.16-ACRE TRACT OF LAND OUT OF THE SOUTHEAST QUARTER OF BLOCK 21, HOMESTEAD ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS, FROM MF-22, MULTIPLE-FAMILY DWELLING DISTRICT TO SF-3, SINGLE-FAMILY DWELLING DISTRICT (GENERALLY LOCATED ON THE WEST SIDE OF NORTH MINEOLA STREET, APPROXIMATELY 92 FEET NORTH OF EAST MICHIGAN AVENUE); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning a 0.16-acre tract of land out of the southeast quarter of Block 21, Homestead Addition, City and County of Midland, Texas, said tract being more specifically described by metes and bounds in Exhibit "A", which is attached hereto and incorporated herein (the "Property"), to SF-3, Single-Family Dwelling District, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from MF-22, Multiple-Family Dwelling District to SF-3, Single-Family Dwelling District.

SECTION TWO. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2022; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council

member _____, on the _____ day of _____, A.D., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

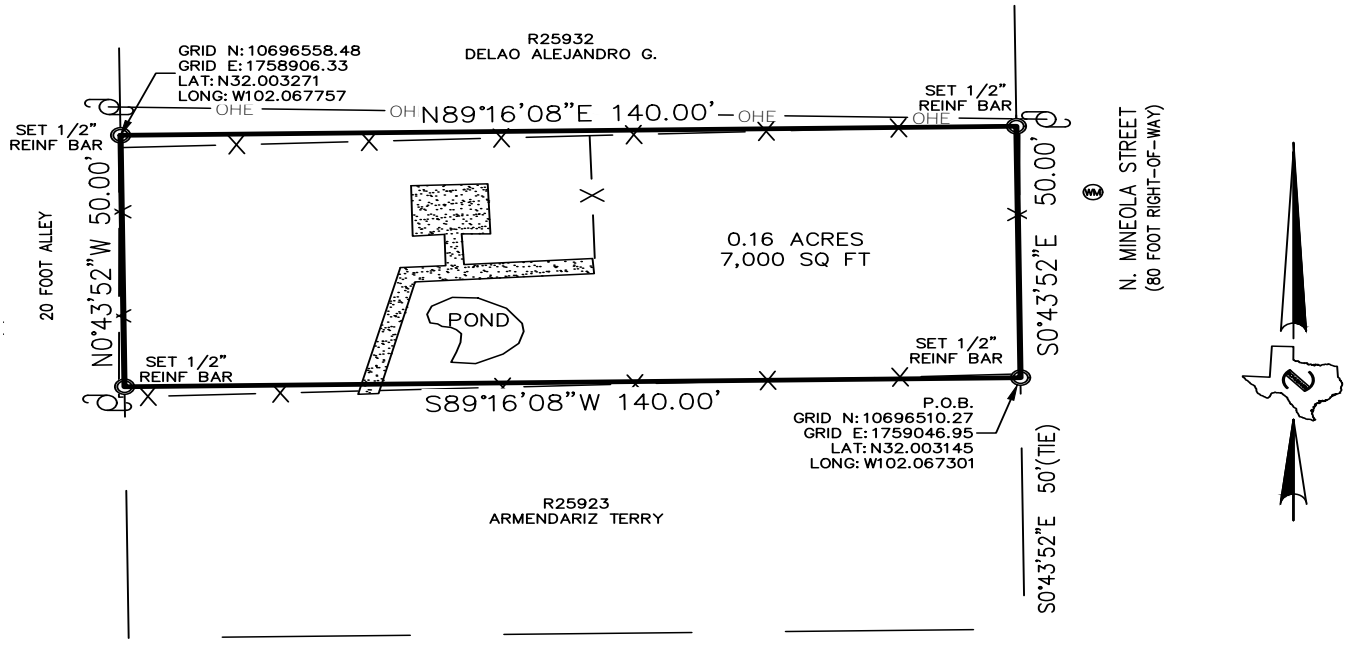
APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"



FIELD NOTE DESCRIPTION OF A0.16 ACRE TRACT OF LAND, OUT OF THE BLOCK 21, HOMESTEAD ADDITION MIDLAND COUNTY, TEXAS, SAID 0.16 ACRE TRACT DESCRIBED MORE FULLY BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A 1/2" REINF BAR FOUND/SET (N:10696510.27, E:1759046.95) FOR THE SOUTHEAST CORNER OF THIS TRACT, FROM WHICH THE SOUTHEAST CORNER OF SAID BLOCK 21 BEARS SOUTH 0°43'52" EAST 50 FEET;

THENCE SOUTH 89°16'08" WEST 140 FEET TO A 1/2" REINF BAR SET FOR THE SOUTHWEST CORNER OF THIS TRACT;

THENCE NORTH 0°43'52" WEST 50 FEET TO A 1/2" REINF BAR SET FOR THE NORTHWEST CORNER OF THIS TRACT;

THENCE NORTH 89°16'08" EAST 140 FEET TO A 1/2" REINF BAR SET FOR THE NORTHEAST CORNER OF THIS TRACT;

THENCE SOUTH 0°43'52" EAST 50 FEET TO THE PLACE OF BEGINNING.

BEARINGS AND DISTANCES SHOWN ARE BASED ON GPS OBSERVATIONS AND CONFORM TO THE "TEXAS COORDINATE SYSTEM" TEXAS CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983.

NOTES:

THIS PROPERTY IS SUBJECT TO THE FINDINGS OF THE MIDLAND COUNTY COMMISSIONERS COURT ON AUGUST 24, 2020. IN WHICH MIDLAND COUNTY ADOPTED SUBDIVISION REGULATIONS ARTICLES I–XI AND CHAPTER 232 OF THE TEXAS LOCAL GOVERNMENT CODE..

BEARINGS AND DISTANCES SHOWN ARE BASED ON GPS OBSERVATIONS AND CONFORM TO THE "TEXAS COORDINATE SYSTEM" TEXAS CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983.

THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF TITLE COMMITMENT. NOT ALL EASEMENTS OR MATTERS OF TITLE MAY BE SHOWN.

THIS SURVEY DOES NOT GUARANTEE OWNERSHIP.

LEGEND:

- MONUMENT AS DESCRIBED
- PROPERTY LINE
- ADJOINING PROPERTIES
- OHE — OVERHEAD ELECTRIC
- UTILITY POLE
- WM — WATER METER
- CONCRETE

Surveyor Certification

TO THE LIENHOLDERS, DAVIS LAABS

(OWNER) OF THE PREMISES AND TO THE ISSUING TITLE INSURANCE UNDERWRITER: THE UNDERSIGNED DOES HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON AND THAT THERE ARE NO KNOWN DISCREPANCIES, CONFLICTS, SHORTAGES IN AREA, BOUNDARY LINE CONFLICTS, ENCROACHMENTS, OVERLAPPING OF IMPROVEMENTS, EASEMENTS OR RIGHTS-OF-WAY, EXCEPT AS SHOWN HEREON.

DATED THIS 6TH DAY OF JUNE, 2022

RJ DAUM
TEXAS RPLS 4826

STATE OF TEXAS
REGISTERED
RJ DAUM
4826
PROFESSIONAL
LAND SURVEYOR

SURVEY

M.50 FEET OF THE SE/4

BLOCK 21

HOMESTEAD ADDITION

AN ADDITION TO THE CITY OF MIDLAND,

AS PER PLAT

IN VOLUME 1, PAGE 242 DEED RECORDS.
MIDLAND COUNTY, TEXAS

SCALE: 1" = 30'

PROJECT: 78571
JOB NO.: 78571

SCHUMANN ENGINEERING CO.
A LATERAL LAND COMPANY
CIVIL ENGINEERING - LAND SURVEYING
TEXAS FIRM No. F1880 – TEXAS FIRM No. 10149500
800 N. MARIENFELD ST. #100
MIDLAND, TEXAS 79701
(432) 684-5548

MIDLAND Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: 2-22-0294

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Davis Laabs		Phone (432) 967-0013 Email laabsdavis@gmail.com	
Address 1601 Magnolia Av.	City Midland	State Texas	Zip 79705
Property Owner Printed Name: Davis Laabs		Phone (432) 967-0013 Email laabsdavis@gmail.com	
Address 1601 Magnolia Av.	City Midland	State Texas	Zip 79705
Representative *(if different from Applicant or Property Owner)* Firm: Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address: 603 Av Mineola

Legal Description
Lot: Block: 21 Subdivision: Homestead S/D #

Current Zoning: MF22

Proposed Zone: SF-3
(List by tracts if more than one district is requested)

Reason for Zone Change Request: To Build A Residence Home

Present Use of Property: NONE, Property Is Vacant

Proposed Use of Property: Build A 2 Bedroom, Living, Dinning, Kitchen Room House 1,000 Sq Foot Home

How would this zone change affect the public health, safety and welfare?

Describe how conditions affecting the property have changed since present zoning designation:

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

RECEIVED
MAY 05 2022
BY: DL

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature): Davis Laabs	Date: 2-5-2022
Applicant (printed): Davis Laabs	
Property Owner (signature): Davis Laabs	Date: 2-5-2022
Property Owner (printed) : Davis Laabs	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appear_____who, being by me duly sworn, upon oath says: That (s)he is the owner of _____or authorized by_____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

_____
Authorized Agent (*signature*)

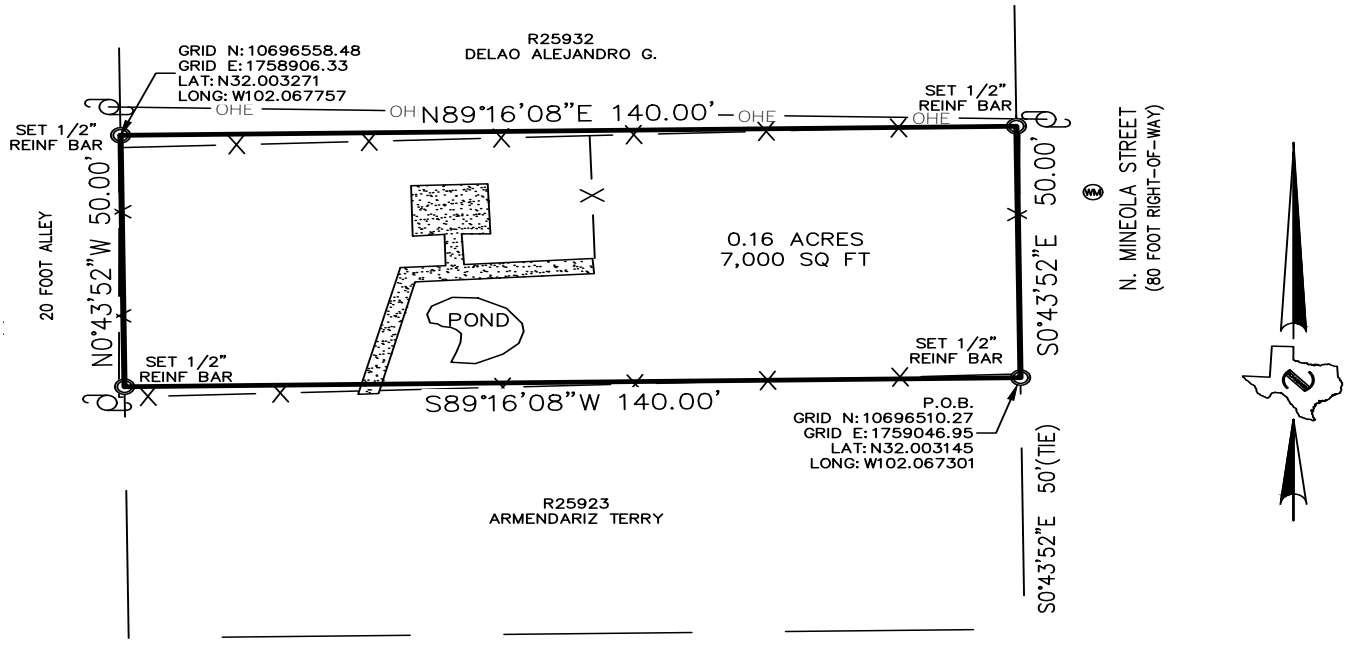
Subscribed and sworn to before me, this_____day of_____, 20____, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☒ Property Owner Authorization	☒ Dimensioned Site Plan
☒ Application Fee	☐ Plans in Digital Format (PDF/JPEG)
Check # CASH (500.00)	
Received By:	Date: RECEIVED MAY 05 2022
	BY: DL

****Application will not be considered for scheduling until reviewed by a planner.****



FIELD NOTE DESCRIPTION OF A0.16 ACRE TRACT OF LAND, OUT OF THE BLOCK 21, HOMESTEAD ADDITION MIDLAND COUNTY, TEXAS, SAID 0.16 ACRE TRACT DESCRIBED MORE FULLY BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A 1/2" REINF BAR FOUND/SET (N:10696510.27, E:1759046.95) FOR THE SOUTHEAST CORNER OF THIS TRACT, FROM WHICH THE SOUTHEAST CORNER OF SAID BLOCK 21 BEARS SOUTH 0°43'52" EAST 50 FEET;

THENCE SOUTH 89°16'08" WEST 140 FEET TO A 1/2" REINF BAR SET FOR THE SOUTHWEST CORNER OF THIS TRACT;

THENCE NORTH 0°43'52" WEST 50 FEET TO A 1/2" REINF BAR SET FOR THE NORTHWEST CORNER OF THIS TRACT;

THENCE NORTH 89°16'08" EAST 140 FEET TO A 1/2" REINF BAR SET FOR THE NORTHEAST CORNER OF THIS TRACT;

THENCE SOUTH 0°43'52" EAST 50 FEET TO THE PLACE OF BEGINNING.

BEARINGS AND DISTANCES SHOWN ARE BASED ON GPS OBSERVATIONS AND CONFORM TO THE "TEXAS COORDINATE SYSTEM" TEXAS CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983.

NOTES:

THIS PROPERTY IS SUBJECT TO THE FINDINGS OF THE MIDLAND COUNTY COMMISSIONERS COURT ON AUGUST 24, 2020. IN WHICH MIDLAND COUNTY ADOPTED SUBDIVISION REGULATIONS ARTICLES I–XI AND CHAPTER 232 OF THE TEXAS LOCAL GOVERNMENT CODE..

BEARINGS AND DISTANCES SHOWN ARE BASED ON GPS OBSERVATIONS AND CONFORM TO THE "TEXAS COORDINATE SYSTEM" TEXAS CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983.

THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF TITLE COMMITMENT. NOT ALL EASEMENTS OR MATTERS OF TITLE MAY BE SHOWN.

THIS SURVEY DOES NOT GUARANTEE OWNERSHIP.

LEGEND:

- MONUMENT AS DESCRIBED
- PROPERTY LINE
- ADJOINING PROPERTIES
- OHE — OVERHEAD ELECTRIC
- UTILITY POLE
- WM — WATER METER
- CONCRETE

Surveyor Certification

TO THE LIENHOLDERS, DAVIS LAABS

(OWNER) OF THE PREMISES AND TO THE ISSUING TITLE INSURANCE UNDERWRITER: THE UNDERSIGNED DOES HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON AND THAT THERE ARE NO KNOWN DISCREPANCIES, CONFLICTS, SHORTAGES IN AREA, BOUNDARY LINE CONFLICTS, ENCROACHMENTS, OVERLAPPING OF IMPROVEMENTS, EASEMENTS OR RIGHTS–OF–WAY, EXCEPT AS SHOWN HEREON.

DATED THIS 6TH DAY OF JUNE, 2022

RJ DAUM
TEXAS RPLS 4826

STATE OF TEXAS
REGISTERED
RJ DAUM
4826
PROFESSIONAL
LAND SURVEYOR

SURVEY

M.50 FEET OF THE SE/4

BLOCK 21

HOMESTEAD ADDITION

AN ADDITION TO THE CITY OF MIDLAND,

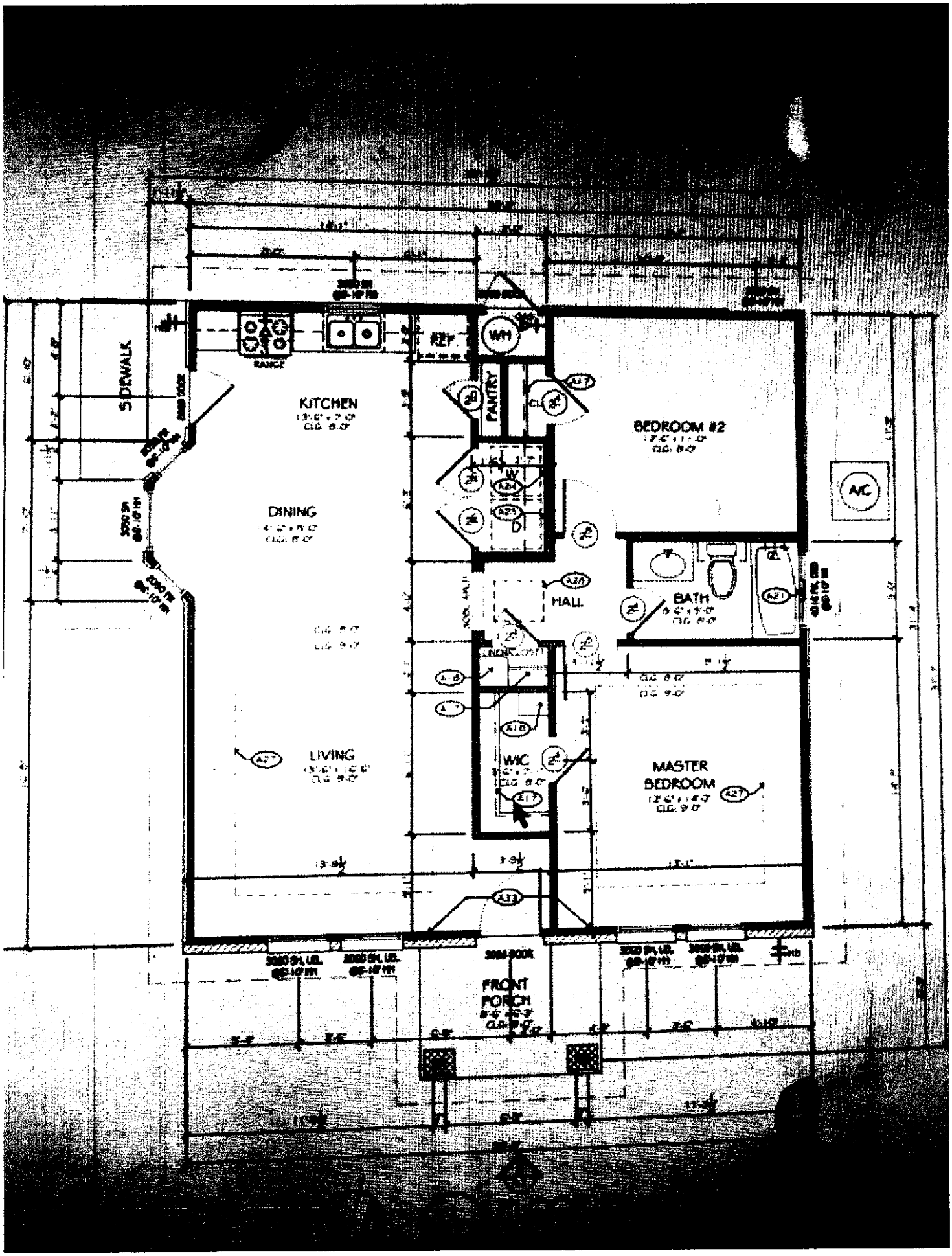
AS PER PLAT

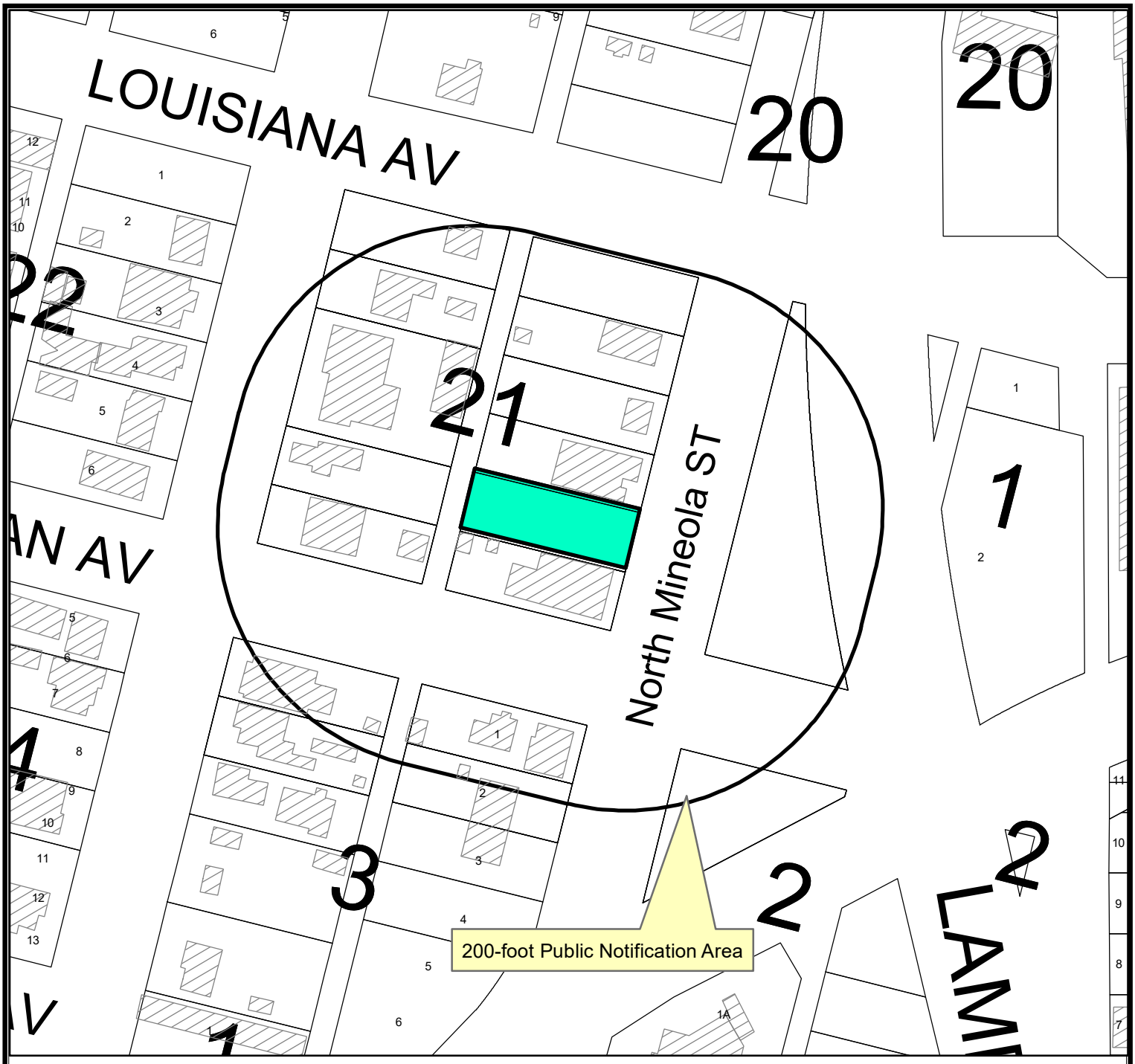
IN VOLUME 1, PAGE 242 DEED RECORDS.
MIDLAND COUNTY, TEXAS

SCALE: 1" = 30'

PROJECT: 78571
JOB NO.: 78571

SCHUMANN ENGINEERING CO.
A LATERAL LAND COMPANY
CIVIL ENGINEERING – LAND SURVEYING
TEXAS FIRM No. F1880 – TEXAS FIRM No. 10149500
800 N. MARIENFELD ST. #100
MIDLAND, TEXAS 79701
(432) 684-5548


SIDEWALK
RANGE
REF.
WH
PANTRY
KITCHEN
BEDROOM #2
DINING
A/C
HALL
BATH
LINEN
LIVING
WIC
MASTER
BEDROOM
FRONT
PORCH



LOCATION MAP

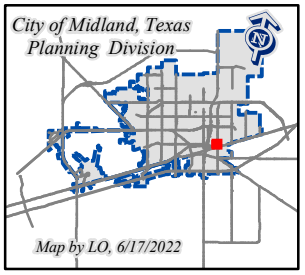
Z-22-0294 **Scale: 1" = 1,411'**

Consider a request by David Laabs for a zone change from MF-22, Multiple-Family Dwelling District, to SF-3, Single-Family Dwelling District on a 0.16-acre tract of land out of the southeast quarter of Block 21, Homestead Addition, City and County of Midland, Texas.

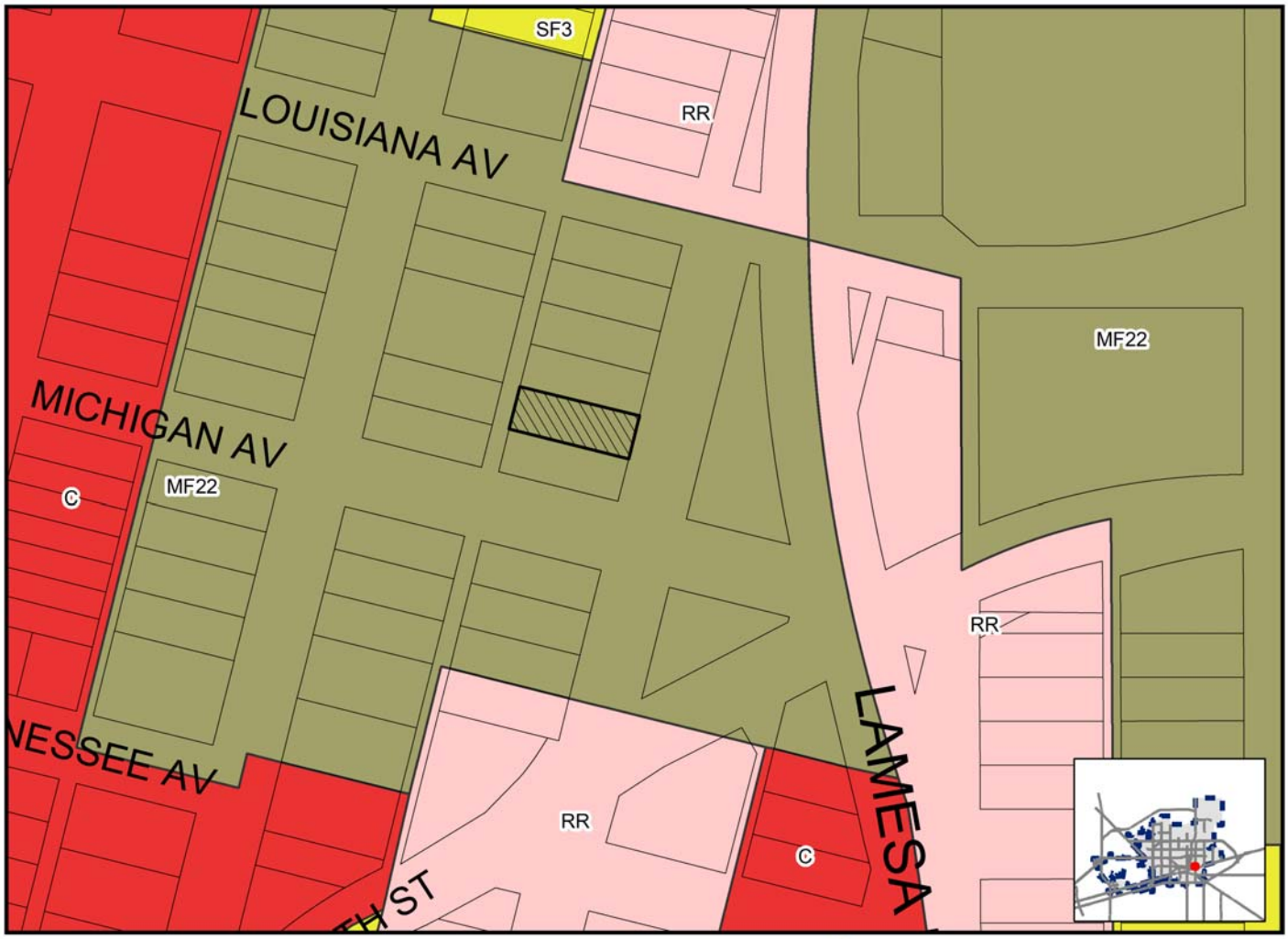
Generally located on the west side of N Mineola Street, approximately 92-feet north of E. Michigan Avenue. (Council District 2)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



Map By ES, 7/8/2021 **Z-22-0294** **Scale: 1" = 1, 600'** **ZONING MAP**

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2214
MIDLAND





City Council Meeting

Item Number: 14

Meeting Date: August 09, 2022 (July 26, 2022)

To: City Council / City Manager

From: Kelly Martinez, Senior Planner

Subject: AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 3, BLOCK 13, GRAFALAND ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF STOREY AVENUE AND EAST BROADWAY STREET), BY PERMITTING (1) A REDUCED MINIMUM REAR YARD SETBACK AND (2) A REDUCED MINIMUM SIDE YARD SETBACK ON THE WEST SIDE OF THE LOT; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION (DISTRICT 3) (DEVELOPMENT SERVICES)

Purpose:

The applicant, Stephen Melnyk, is requesting a Special Exception from the City of Midland Zoning Ordinance, *Section 4.09 Accessory Building and Uses* for a reduced minimum rear and side yard setbacks for the property located at 1505 Storey Avenue.

Recommended City Council Action:

Deny

Fiscal Impact:

No City funds are required to process this request.

Discussion:

The applicant's property is located at 1505 Storey Avenue and the location of a single-family

residence. The applicant is requesting a special exception to the minimum rear and side yard setbacks. They are proposing to expand their existing garage towards the rear and side property lines near the alley. The garage is a legal nonconforming structure; The garage does not meet the side yard and rear yard setback requirements of the current zoning ordinance. The expansion of the garage will drive this structure further into noncompliance with the zoning code.

Per our City of Midland Zoning Ordinance, *Section 4.09 – Accessory Buildings and Uses*
Table 5: Residential Accessory Building Requirements
Lots 7,500 sq. ft. up to 21,999 sq. ft.
Minimum side and rear yard setback: 5 feet

Therefore, the proposed addition of the garage must maintain 5 feet from the rear and side yard property line as listed in the zoning ordinance.

This request has been circulated to all pertinent City departments for review. Below are the departments' comments.

Engineering: (Approved)

No objection to zone change. [For the Applicant's information only.]

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For the Applicant's information only.]

Transportation: (Approved with Conditions)

Contractor needs to apply for a driveway permit.

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For the Applicant's information only.]

No objection to zone change. [For the Applicant's information only.]

Fire: (Approved)

No objections.

Code Compliance: (Approved)

No Oil and Gas issues.

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2020 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary. Code versions are subject to change depending on time of new code edition adoption in the City of Midland and date of permit application.

Planning Analysis:

As this request represents a deviation from the existing Zoning Ordinance, staff recommends denial of this application for a Special Exception to the City of Midland Zoning Ordinance, *4.09. Accessory Buildings and Uses* for a reduced minimum rear and side yard setback.

Should the City Council approve this request, the property shall be subject to conditions A through C:

Conditions:

A. **That Property shall significantly conform to the conditions shown in Exhibit "A", which is attached hereto and incorporated herein.**

B. **That the minimum rear yard setback for the proposed addition to the garage shall be 0 (zero).**

C. **That the minimum side yard setback on the west side of the property for the proposed addition to the garage shall be 0 (zero)**

Letters of Objection:

As of July 13, 2022, staff has not received any letters of objection

Attachments:

Application
Site Plan (Exhibit A)
Maps

Morris Williams Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 3, BLOCK 13, GRAFALAND ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF STOREY AVENUE AND EAST BROADWAY STREET), BY PERMITTING (1) A REDUCED MINIMUM REAR YARD SETBACK AND (2) A REDUCED MINIMUM SIDE YARD SETBACK ON THE WEST SIDE OF THE LOT; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION

WHEREAS, the City Council modified the authority of the Board of Adjustment in Title XI, Chapter 1, Section 7 ("Section 11-1-7") of the Midland City Code; and

WHEREAS, Section 11-1-7 provides for the consideration of requests for special exceptions to the Midland Zoning Ordinance; and

WHEREAS, the Council finds that satisfactory evidence has been presented that the use to be authorized by the granting of the special exception will not be detrimental to the health, safety, comfort and welfare of the occupants of the land area near the tract on which the use to be allowed by special exception will be located; and

WHEREAS, the Council finds that it is clearly and specifically authorized by the terms of Section 11-1-7 to grant such a special exception, and said exception will be in harmony with the general purposes and intent of the zoning provisions of the Midland City Code; and

WHEREAS, after a full and fair public hearing at which all parties in interest were offered an opportunity to be heard, all pursuant to law, the Council finds it to be in the public interest to grant a special exception to the Zoning Ordinance, pursuant to Section 11-1-7, for the purposes herein stated, subject to special conditions;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE

CITY OF MIDLAND, TEXAS:

SECTION ONE. That a special exception is hereby granted for the property described as Lot 3, Block 13, Grafaland Addition, Section 2, City and County of Midland, Texas (the "Property"). Said special exception shall allow (1) a reduced minimum rear yard setback and (2) a reduced minimum side yard setback on the west side of the Property.

SECTION TWO. Said special exception is subject to the following special conditions:

A. That the minimum rear yard setback for the addition to the garage shall be zero feet (0').

B. That the minimum side yard setback on the west side of the Property for the addition to the garage shall be zero feet (0').

C. That the Property shall significantly conform to the conditions shown in Exhibit "A", which is attached hereto and incorporated herein for all purposes.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to file this ordinance with the Office of the County Clerk for purposes of recordation.

SECTION SEVEN. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2022; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

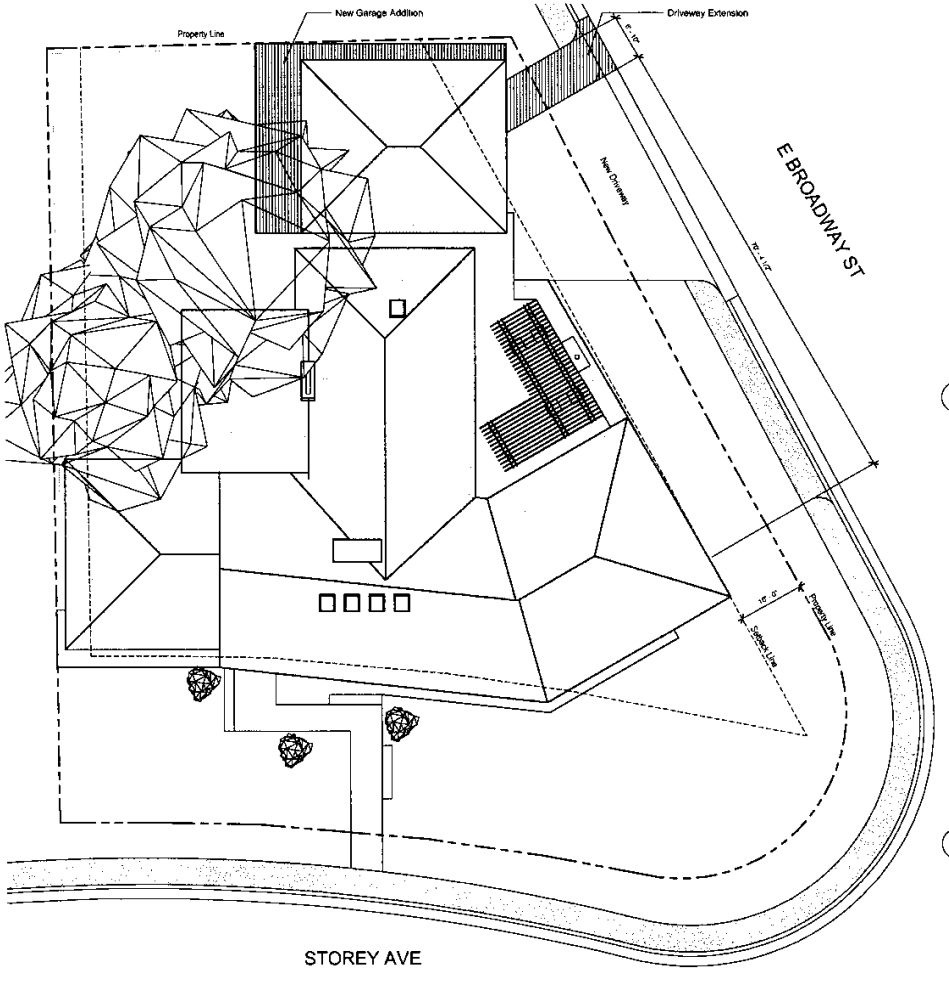
APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

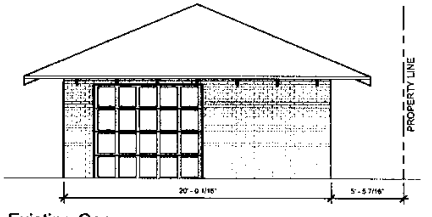
APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

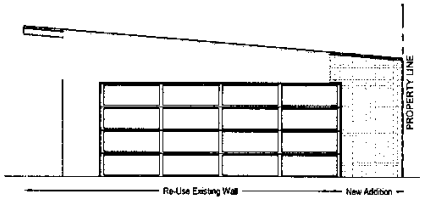
EXHIBIT "A"



1 SITE PLAN
1/8" = 1'-0"



2 Existing Garage
1/4" = 1'-0"



3 Garage With Addition
1/4" = 1'-0"

MELNYK
RESIDENCE
1505 Storey Avenue
Midland, Texas 79701

rwa
rhotenberry
wellen
architects
1102 WEST TEXAS AVE.
MIDLAND, TEXAS 79701
PHONE 432.682.1252
FAX 432.682.1257

△	Date	Description
		ISSUE FOR INTERIM REVIEW

Seal / Signature

THESE DRAWINGS ARE FOR INTERIM REVIEW AND PRICING ONLY. NOT INTENDED FOR CONSTRUCTION - RWA

Project Number
2209

Description
Garage Addition

SD2

© 2019 Rhotenberry Wellen Architects

MIDLAND
Planning Division

Special Exception Application

Project Number: E-22-0082

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Stephen Melnyk		Phone (817)550-7260 Email sjmelnyk@gmail.com	
Address 1505 Storey Ave	City Midland	State TX	Zip 79701

Property Owner Printed Name: Stephen Melnyk		Phone (817) 550-7260 Email sjmelnyk@gmail.com	
Address 1505 Storey Ave	City Midland	State TX	Zip 79707

Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name: Stephen Melnyk		Phone (817)550-7260 Email sjmelnyk@gmail.com	
Address	City	State	Zip

Street Address: 1505 Storey Ave Midland, TX, 79707

Legal Description
Lot: 003 Block: 013 Subdivision: Grafaland Sec 2

Current Zoning:

This property qualifies as an exception to the City Code because:

- ☐ It is an expansion of a nonconforming use.
- ■ There are existing nonconforming structures in the area.
- ■ The addition of architectural or other projections of a minor extent.

Reason for Request: Garage on property is requested to be expanded on one side towards the back property line (towards current ally). Garage front does not meet current set back requirements, request to keep the west facing wall of the garage where it stands now and not move it. Expanding garage to the south with no overhang on the property line with a slanted roof wide enough for a 2-car garage

Submittal and Fees

Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan showing:
  - Parking
  - Building Footprint
- Digital Copies of Site Plan (PDF/JPEG)

Signatures	
Applicant (signature): Stephen Melnyk	Date 6/24/2022
Applicant (printed): Stephen Melnyk	
Property Owner (signature): Stephen Melnyk	Date 6/24/2022
Property Owner (printed): Stephen Melnyk	

The Special Exception shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared _____ who, being by me duly sworn, upon oath says: That (s)he is authorized by _____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

_____
Authorized Agent (*signature*)

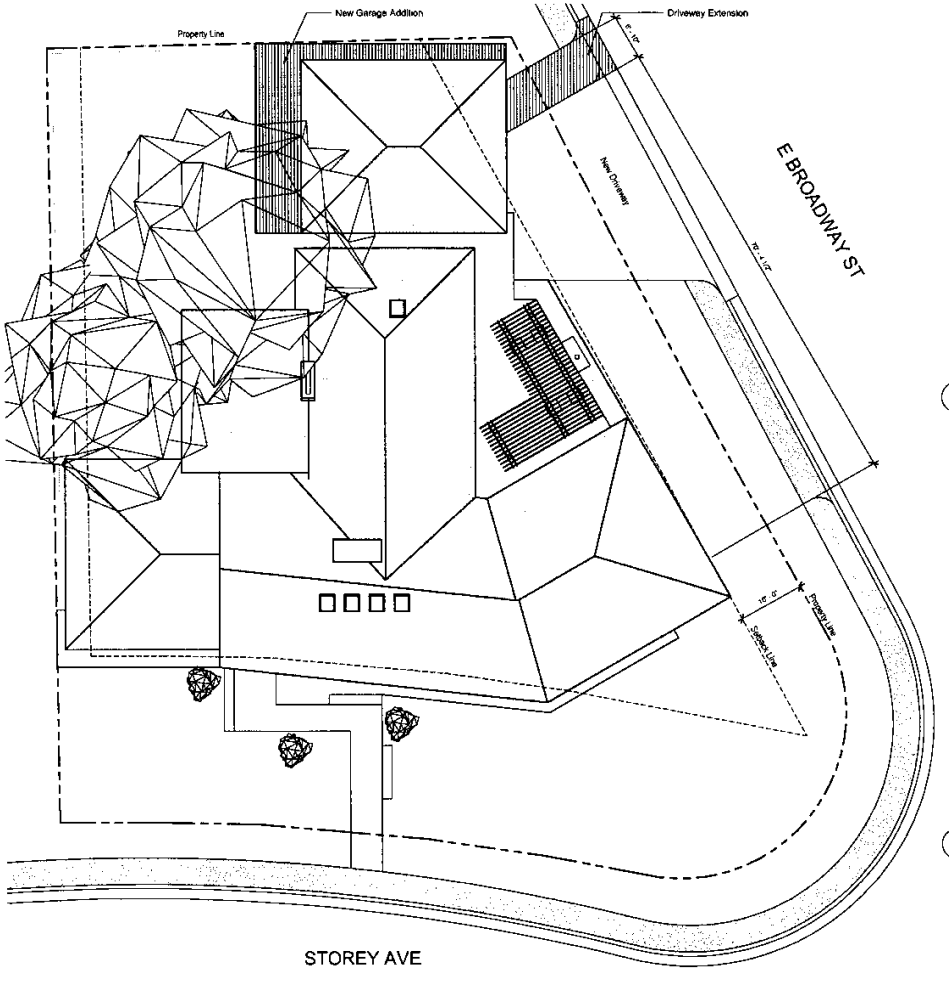
Subscribed and sworn to before me, this _____ day of _____, 20 ___, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

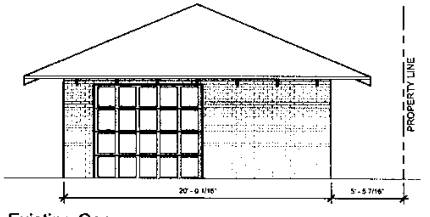
FOR OFFICE USE ONLY

☒ Property Owner Authorization	☒ Dimensioned Site Plan
☒ Application Fee	☒ Plans in Digital Format (PDF/JPEG)
Check # CC	
Received By: DL	Date: RECEIVED JUN 24 2022

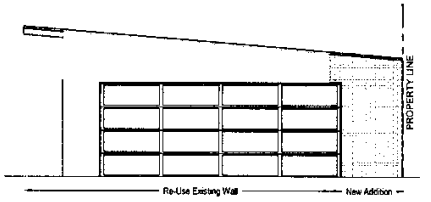
****Application will not be considered for scheduling until reviewed by a planner.****



1 SITE PLAN
1/8" = 1'-0"



2 Existing Garage
1/4" = 1'-0"



3 Garage With Addition
1/4" = 1'-0"

MELNYK
RESIDENCE

1505 Storey Avenue
Midland, Texas 79701

rwa
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1102 WEST TEXAS AVE.
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PHONE 432.682.1252
FAX 432.682.1257

△	Date	Description
		ISSUE FOR INTERIM REVIEW

Seal / Signature

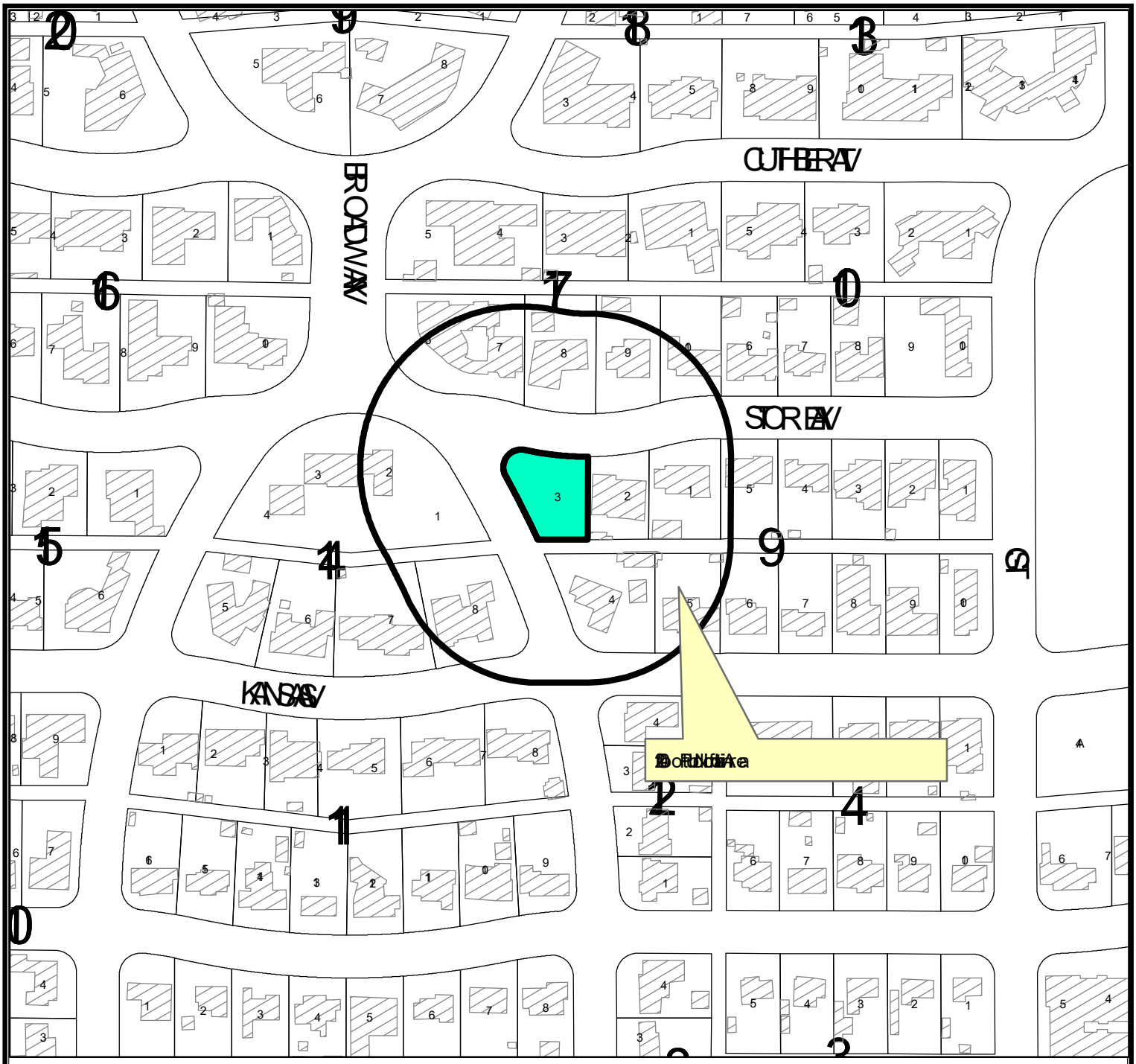
THESE DRAWINGS ARE FOR INTERIM REVIEW AND PRICING ONLY. NOT INTENDED FOR CONSTRUCTION - RWA

Project Number
2209

Description
Garage Addition

SD2

© 2019 Rhotenberry Wellen Architects



LOCATION MAP

E-22-0082 **Scale: 1" = 200'**

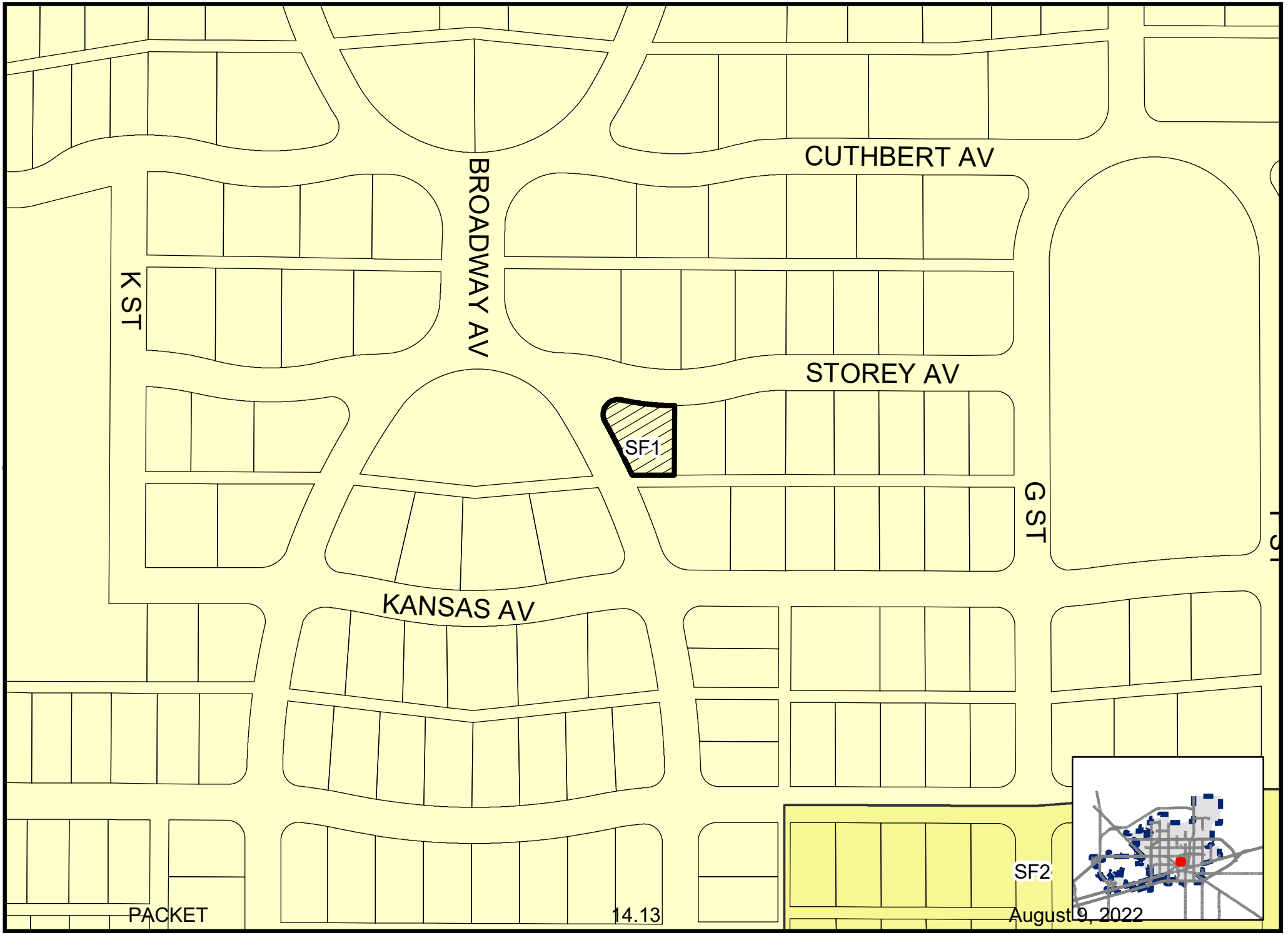
Consider a request by Stephen Melnyk for a Special Exception from the City of Midland Zoning Ordinance, Section 4.09 Accessory Building and Uses for a reduced minimum rear and side yard setbacks on Lot 3, Block 13, Grafaland Addition, Section 2, City and County of Midland, Texas.
Generally located on the southeast corner of the intersection of Storey Avenue and East Broadway Street. (Council District 3)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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Map By KM, 06/30/2022

E-22-0082

Scale: 1" = 200'

ZONING MAP

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City Council Meeting

Item Number: 15

Meeting Date: August 09, 2022 (July 26, 2022)

To: City Council / City Manager

From: Christy Weakland, Director

Subject: AN ORDINANCE ADOPTING A FEE SCHEDULE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING AN APPEAL PROCESS; ESTABLISHING AN EFFECTIVE DATE OF OCTOBER 1, 2022; AND ORDERING PUBLICATION (DISTRICT: NONE) (FINANCE)

Purpose:

Revise an Ordinance establishing regulatory and user fees collected by the City of Midland in order to adequately cover the costs and expenses incurred by the City in connection with providing the services associated with said fees.

Recommended City Council Action:

Approve

Fiscal Impact:

Regulatory and User Fees generate revenue designed to cover the cost of the service being provided by the City of Midland

Discussion:

Fee revisions are from the Community Services and Sanitation departments.

The Golf Course is increasing green and cart fees to help offset the cost of daily operations while continuing to provide a fun and memorable experience for all.

The Health Department is increasing vaccination fees and adding a fee for a new vaccine. The fee changes and addition are to cover the costs of vaccinations.

Animal Services is implementing various fee increases, a few decreases, and new fees for

services provided.

The Parks division changed multiple fees, added new fees, and removed a few fees.

The Recreation division removed fees associated with the Auxiliary Fields and moved the fees to the Sports Complex division.

Sports Complex is increasing several fees, adding new fees, and removing a couple of fees from the fee schedule and restructuring the rate charges.

In addition, the Sanitation Fee Schedule has been updated with a 2% increase in collection rates and 20% increase on Landfill rates.

All rates will be effective October 1, 2022.

Please see attached memos and exhibits for further information.

Morris Williams Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE ADOPTING A FEE SCHEDULE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING AN APPEAL PROCESS; ESTABLISHING AN EFFECTIVE DATE OF OCTOBER 1, 2022; AND ORDERING PUBLICATION

WHEREAS, the City Council finds it to be in the public interest to establish fees collected by the City of Midland in order to adequately cover the costs and expenses incurred by the City in connection with providing the services associated with said fees; and

WHEREAS, the City Manager's designees have prepared Exhibits "A" through "O", which are attached hereto and incorporated herein for all purposes, identifying said fees (collectively, the "Fee Schedule"); and

WHEREAS, the City Council of the City of Midland, Texas, finds it to be in the public interest to adopt the Fee Schedule and to establish the fees identified therein as the fees to be collected by the City of Midland, said fees being reasonably related to the costs and expenses incurred by the City in connection with providing the services associated with said fees;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS;

SECTION ONE. That the facts and recitations contained in the preamble of this ordinance are hereby found and declared to be true and correct and are adopted as part of this ordinance for all purposes.

SECTION TWO. That the Fee Schedule is hereby approved and adopted. The fees identified in the Fee Schedule are hereby established as the fees to be collected by the City of Midland except for the following types of fees: a fee charged to a requestor who submits a request for information under the Texas Public Information Act; a fee assessed by the Municipal Court that is not identified in the Fee Schedule; a fee established by a contract, to the extent that the fee established by the contract conflicts with or is not identified in the Fee Schedule; a drainage charge; an impact fee; a fee prescribed by a state law, rule, or

regulation; or a fee for which a state law, rule, or regulation, or the City Charter requires a procedure to be followed to establish the fee other than the procedure that was followed to adopt the Fee Schedule.

To the extent that a fee identified in the Fee Schedule conflicts with a fee that was previously established by ordinance (including an ordinance that has been codified in the City Code), resolution, or other City of Midland instrument, this ordinance shall supersede such previous ordinance, resolution, or other instrument, and the fee identified in the Fee Schedule shall be the applicable fee.

To the extent that a fee identified in the Fee Schedule conflicts with a fee prescribed by a state law, rule, or regulation, the fee prescribed by the state law, rule, or regulation shall be the applicable fee.

To the extent that a fee identified in the Fee Schedule is a fee for which a state law, rule, or regulation, or the City Charter requires a procedure to be followed to establish the fee other than the procedure that was followed to adopt the Fee Schedule, such fee that was previously established by following the applicable procedure shall be the applicable fee.

SECTION THREE. Any person wishing to appeal the payment of a fee identified in the Fee Schedule may do so in accordance with the law, rule, regulation, or ordinance that established the procedure for appealing such fee. To the extent no such appeal procedure has been established for a fee identified in the Fee Schedule that is not a fee assessed by the Municipal Court, the following appeal procedure shall apply:

A. Any person may appeal in writing to the City Manager, or the City Manager's designee, prior to paying the fee or after paying the fee. Any person may appeal in writing to the City Manager, or the City Manager's designee, if the person believes that he or she cannot afford the fee. The person may seek an exemption from all or part of the fee. The City Manager, or the City Manager's designee, shall make certain that the fee is not paid under duress.

If a person wishes to appeal after payment of the fee, the person shall appeal in writing to the City Manager, or the City Manager's designee, within ten (10) calendar days of paying the fee.

B. The City shall not file criminal charges against any person related to non-payment of the fee if the fee is not paid. The City shall not file criminal charges against a person in an attempt to collect the fee.

C. The City Manager, or the City Manager's designee, shall provide a full and meaningful review process. The City Manager, or the City Manager's designee, shall provide a fair opportunity for a person to challenge the accuracy and legal validity of his or her fee obligation. The City Manager, or the City Manager's designee, shall also provide a clear and certain remedy for any erroneous or unlawful fee collection to ensure that the opportunity to contest the fee is a meaningful one. Options that the City Manager, or the City Manager's designee, shall consider in providing a clear and certain remedy are a refund of any excess fee paid, as well as other factors, such as ensuring that a person may continue the operation of his or her business.

D. The City Manager, or the City Manager's designee, shall make his or her decision within ten (10) days of receiving the written notice of appeal. The City Manager, or the City Manager's designee, shall ensure that a person has all rights under any applicable law. A person shall incur no financial hardship by exercising his or her right to appeal.

SECTION FOUR. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FIVE. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid

SECTION SIX. That this ordinance shall become effective on October 1, 2022.

SECTION SEVEN. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2022; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Robert Patrick, City Manager

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

Exhibit A

City Secretary

	Fee
Business Regulations	
Junk and secondhand goods license	$25.00
Renewal of junk and secondhand good	$10.00
Alcoholic Beverage License Fee	1/2 of State Fee
Taxicab annual operating fee (each)	$200.00
Limo or Motorbus operating fee (each)	$100.00
Passports	
Execution Fee (DS-11)	$35.00
Renewal Mailing Fee (DS-82)	$10.00
Passport Photograph	$18.00
Expedited Shipping Fee (DS-11)	$26.40
Expedited Shipping Fee (DS-82)	$32.95
Notarization Fee	$10.00
Copies	$0.25

Exhibit B

Parks

	Fee
TEMP FENCING	
Deposit	$200.00
Rental Fee (per panel)	$20/day
SHOWMOBILE	
Deposit	$1,000.00
Rental Fee (minimum of 4 hours)	$62.50/hour
Extensions	$100.00
Show Lights	$200.00
PORTABLE BLEACHERS	
Deposit	$100.00
Rental Fee (per day)	$100.00
PORTABLE STAGE	
Deposit	$100.00
Rental Fee	$100.00
TRASH CANS	
Deposit	$100.00
Rental Fee (minimum of 10 cans)	$5.00/can/day
PARK PAVILION RENTAL	
Deposit	$100.00
Rental Fee 9am-10pm	$60.00
Rental Fee 9am-3pm	$30.00
Rental Fee 4pm-10pm	$40.00
BEAL RANCH HOUSE	
Deposit no Alcohol	$300.00
Deposit w/Alcohol	$500.00
Rental Fee Per Hour	$50.00
GAZEBO RENTALS - WADLEY AND BEAL	
Deposit	$100.00
Rental Fee 9 am- 3 pm	$50.00
Rental Fee 4 pm-10 pm	$50.00
Rental Fee 9 am-10 pm	$100.00
BASEBALL/SOFTBALL FIELD RENTALS	
Artifical Turf Fields Rental Fee	$50.00/hour
Natural Turf Field Rental Fee	$25.00/hour
Lights	$25.00/hour
Tournament Fee	$25.00/team
FOOTBALL/SOCCER FIELD RENTALS	
Artifical Turf Fields Rental Fee	$50.00/hour
Natural Turf Field Rental Fee	$25.00/hour
Lights	$25.00/hour
Tournament Fee	$30/game
CONCESSION RENTALS	
Concession Stand Deposit	$100.00
Concession Stand Rental	$25.00/hour

ULMER SAND VOLLEYBALL COURT	
Deposit	$25.00
Rental Fee	$25.00/day
WHITEHOUSE RENTAL	
Deposit	$200.00
Rental Fee 10 am - 4 pm	$200.00
Rental Fee 6 pm - 12 am	$200.00
Rental Fee All Day	$400.00

Exhibit C

Recreation

		Fee
CITY POOL RATES		
Entry Fee		$3.00
Children under 2		Free
10 Punch Card		$15.00
25 Punch Card		$35.00
75 Punch Card		$75.00
Personal Cooler Admission		$10.00
Soda		$3.00
Water		$2.00
Snacks		$2.00
Swim lesson (1 week)		$20.00
Life Jacket Rental		$1.00
PRIVATE RENTALS		
DEPOSIT		$150.00
RENTAL FEE (2 hours)		$850.00
POOL PAVILION RENTALS		
(Doug Russell Only)		
DEPOSIT		$100.00
RENTAL FEE		$100/session
MARTIN LUTHER KING RECREATION CENTER	per hour	
Activity Room		
During Operation		$25.00
After Hours		$35.00
Deposit		$100.00
Activity Rm/with Gameroom	per hour	
During Operation		$50.00
After Hours		$70.00
Deposit		$300.00
Auditorium	per hour	
During Operation		$50.00
After Hours		$75.00
Deposit No Alcohol		$500.00
Deposit Alcohol		$750.00
Gymnasium	per hour	
During Operation		$40.00
After Hours		$60.00
Deposit		$200.00
MLK Volleyball Net Setup Fee		$15.00
Training Room	per hour	

Exhibit C

Recreation

	Fee
Sporting Events ONLY	
During Operation	$50.00
After Hours	$75.00
Deposit	$1,000.00
Daily Entrance Fee	$1.00
Monthly Membership	$15.00
MOVIE SCREEN	
Deposit	$1,000.00
Fee (Maximum 4 hours)	$500.00
BUBBLE SOCCER AT MLK Gym Only	
Deposit	$300.00
During Hrs	$100/hour
After Hours	$125/hour
Bubble Soccer at MLK Gym/Activity Rm	
Deposit	$300.00
During Hrs	$125/hour
After Hours	$135/hour
BUBBLE SOCCER AT MLK Gym/Act Rm/Game Rm	
Deposit	$300.00
During Hrs	Not Avaliable
After Hours	$170/hour
BUBBLE SOCCER NOT @MLK	
Deposit	$500.00
Fee (minimum of 2 hours)	$200/hour

Exhibit D

Health and Senior Services

	Fee
Environmental Section	
Mobile Food Vendor	
Mobile Food Vendor	$175.00
Mobile Food (Seasonal)	$105.00
Temporary Permit	$70.00
Food Services Establishments	
1 thru 5 employees	$150.00
6 thru 10 employees	$200.00
11 or more employees	$250.00
Deli/Meat Market/Bakery	$75.00
Farmers Market	$50.00
Retail Food Store	
1 thru 5 employees	$150.00
6 thru 10 employees	$200.00
11 or more employees	$250.00
Temporary Permit	$70.00
Child Care Programs	
Day Care	$100.00
Foster Care	$50.00
Child Care Program for after School	$50.00
Swimming Pool, Spa, or Water Feature Permit	
Swimming Pool or Spa Permit	$100.00
Water Feature Permit	$100.00
Non-Profit Yearly	$30.00
Non-Profit Temporary	$30.00
Re-inspection (When Establishment is shut down)	$75.00
Septic System Inspections	
Septic System Residential	$150.00
Septic System Commercial	$210.00
Septic re-inspection (When fails initial inspection)	$50.00
Late Fee (When not paid by specified date)	25% of Permit Fee

Clinical Section	
Health Department Services	
DTaP	$45.00
Kinrix (DTaP & Polio)	$100.00
Pentacel (DTaP & Polio & Flu Type B)	$140.00
IPV (Polio)	$50.00
Pedi HEP A	$40.00
Pedi HEP B	$35.00
HIB (Flu Type B)	$40.00

Exhibit D

Health and Senior Services

	Fee
Vaxelis (DTaP, HIB, Polio & HEB B)	$150.00
Rototeq/Rotarix (Rotavirus)	$140.00
Proquad (MMR & Varicella)	$255.00
PCV 13 (Pneumococcal Conjugate)	$260.00
PPSV23 (Pneumococcal Conjugate)	$145.00
MMR	$90.00
Varicella	$155.00
TD (Tetanus & Diptheria)	$50.00
TDAP (Tetanus Diptheria and Pertussis)	$60.00
HPV 9	$255.00
MCV4 (Meningitis)	$150.00
Menqaudfi (Meningitis)	$200.00
Trumenba (Meningococcal Group B)	$155.00
Bexsero (Meningococcal Group B)	$185.00
Adult Hep A	$70.00
Adult Hep B	$65.00
Heplisav-Adult Hep B	$125.00
Shingrix (Shingles)	$175.00
Infant flu	$25.00
Flu	$30.00
High Dose Flu	$65.00
Flublok	$60.00
Yellow Fever	$130.00
STD Testing	$15.00
HIV Testing	$15.00
STD Clinic Treatment	$15.00
STD Clinic Retreatment	$15.00
Pregnancy Test-Urine	$10.00
Pregnancy Test - Blood	$15.00
TB Test	$15.00
TB Clinic	$15.00
Administration Fees	
Insured	$25.00
TVFC 1=$10, 2=$20, >or= 3 = $30	
Refugee	$0.00
Medicaid/CHIP	$14.85
Medicare Flu or Pneumonia	$25.00

Exhibit E

Animal Services

	Fee
Adoption Fees	
Adoption Fees (includes micro chipping)	$50 for Cats; $75 for Dogs
Ducks, Rabbits, Other	$5.00
Rescue Fee (rabies, microchip, license)	$32.00
Humane Coalition Transfer Fee (with micro chipping) Range $17 to $25	$25.00
Animal Service Discount	$6.73
Vaccines and Medical Fees	
Rabies ($10 special event and $20 reg)	$10.00 or $20.00
Rabies and Booster ($15 special event)	$15.00
Impoundment Fees	
Impoundment - 1st Offense (altered)	$25.00
Impoundment - 1st Offense (unaltered)	$50.00
Impoundment - 2nd Offense (altered)	$50.00
Impoundment - 2nd Offense (unaltered)	$75.00
Impoundment - 3rd+ Offense (altered)	$60.00
Impoundment - 3rd+ Offense (unaltered)	$100.00
Livestock Impoundment	$100.00
Boarding & Quarantine	
Boarding (per day)	$8.00
Quarantine Fees (minimum of 10 days)	$10.00/day
Home Quarantine Fees (minimum of 10 days)	$5.00/day
Pick-up Fees	
Pickup Fee - Owner release	$15.00
Pickup Fee -Owner release (additional animals)	$5.00/each
Pickup Fee - Deceased	$15.00
Pickup Fee - Dead Small Livestock	$75.00
Pickup Fee- Deceased Livestock	$150.00
Transfer to Vet Fee	$15.00
Miscellaneous Fees	
Drop off Fee - Owner release	$10.00
Rabies Specimen Shipping	$75.00
Wild Animal Permit	$25.00
Dangerous Dog Yearly Registration	$50.00
Off Leash Training Permit	$5.00
Microchipping	
Microchips	$8.00
Pet Services	
Flea/Tick Preventative	$15.00
Euthanasia	
Euthanasia	$15.00
Pet Licenses	
Pet License (yearly)	$7.00

Pet License (replacement)	$1.00
Pigeons	
Loft Permit for Pigeons	$3.00
Renewal of Loft Permit	$2.00

Exhibit F

Golf Course

	Fee
Green Fee - Weekday	$21.25
Green Fee - Weekdays after 4:00	$12.25
Green Fee - Weekend	$26.25
Green Fee - Weekend after 4:00	$16.00
Weekend AM - 9 Holes	$15.00
Green Fee - Senior	$16.25
Green Fee - Junior	$9.50
Cart Fee (90%)	$13.75

Exhibit G

Planning

	Fee
Preliminary Plat Application	
Sketch Plan Application (1st review)	$225.00
Sketch Plan Application (2nd review)	$100.00
Preliminary Plat Application (up to 50 acres)	$350.00
Preliminary Plat Application (over 50 acres)	$500.00
Final Plat Application	
Standard Plat or Residential Up to 50 acres	$350.00
Standard Plat or Residential over 50 acres Max	$500.00
Administrative Plat	$250.00
Digital File Conversion Fee	$50.00
Recording Fees- Plats up to 18"x24"	$61.00
Recording Fees- Plats over 18"x24"	$81.00
Related Documents	$26.00
Replat	
Replat with Public Hearing	$250.00
Replat without Public Hearing	$250.00
Annexation/Zone Change Application	
Standard Zone Change	$500.00
Planned District Zone Change	$650.00
Multiple PD Proposal Basic	$550.00
Multiple PD Proposal Per Additional District	$100.00
Additional PD Regulations	$75.00
Site Plan in PDF Format for City Council	$50.00
Application Fee	$500.00
Zoning Board of Appeal Fee	$600.00
Special Exception Application Fee	$500.00
Oil and Gas	
Application for Oil and Gas Permit	$4,000.00
Credit Access Businesses	
Application Fee	$50.00
Specific Use Permit (SUP) / Specific Use Designation (SUD)	
Application for SUP/SUD with Term for Alcoholic Beverage	$300.00
Application for General SUP/SUD	$400.00
Renewal SUP/SUD	$75.00
Temporary Mobile Home	
Special Temporary Permit for Manufactured Home App (Based on Genuine Hardship Condition)	$50.00
Special Temporary Permit for Manufactured Home App (For Occupancy by a Caretaker, Manager, or Guard)	$100.00
Temporary Land Use	
Application Fee	$300.00
For each additional event date	$25.00
Clean-Up Deposit	$500.00

Exhibit G

Planning

		Fee
	Damage Deposit	$500.00
	Outside sale of dogs	$20.00
Site Plan Review		
	Single PD Amendment	$550.00
	Multiple PD Amendment	$650.00
Dedications		
	Review Fee	$400.00
Vacation		
	Application Fee	$400.00
Creation of a Building Site		
	Application Fee	$400.00
Master Sign Plan		
	Application Fee	$300.00
Traffic Impact		
	Traffic Impact (Staff Study)	$350.00
	Traffic Impact (Review of Submittal)	$600.00
Portable Storage Containers		
Freight or Portable storage cont.- permit fee		$125.00
	Each add'l on same property	$25.00
90- day permit fee for storage container		$150.00
	Each add'l container	$25.00
45- day permit fee for storage container		$125.00
	Each add'l container	$25.00
30 day permit fee for storage container		$75.00
Certificate of occupancy and compliance		
Certificate of occupancy and compliance		$10.00

Exhibit H

Code Enforcement

	Fee
Building Permits	
Construction Permit Fee	31.5 cents per square foot
Sidewalk/ROW Residential (No building permit)	$50.00
Sidewalk/ROW Commercial (No building permit)	$200.00
Street Improvement Fee	23 cents per square foot
Fence Fee	$50.00
Manufactured Home	$200.00
Manufactured Home Skirting Deposit	$100.00
Moving Fee	$200.00
Non-Profit Residential	$150.00
Temporary Structure	$100.00
Detached Assessory (120Sq.ft or less)	$50.00
Detached Assessory (120Sq.ft to 200 sq.ft.)	$100.00
Demolition Permits	
Commercial Demo Fee - Building	$500.00
Commerical Demo Fee - Interior	$100.00
Residential or Accessory Bldg	$50.00
Temporary Sign Permits	
Permanent Sign Permits	$50.00
Temporary sign annual permit fee	$50.00
Failure to remove sign- hauling fee	$50.00
Failure to remove sign- daily storage fee	$10.00
Oil & Gas Drilling Permits	
Amendment Fee	$1,000.00
Certification Fee & Inspection	$300.00
Oil & Gas Application Fee	$4,000.00
Well Tranfer Fee	$500.00
***TX State HB-40 recognizes Ordinance 8769 including fees and may not be amended**	
Mobile Home Park Licenses	
Mobile Home Park Licenses	$25.00 plus $1 ea/addl
Certificate of Occupancy	
Certificate of Occupancy	$50.00
Lot Deposits	
Clearing Deposits (Floor & Foundation) Commercial	$2,000.00
Clearing Deposits (Floor & Foundation) Residential	$600.00
Clearing Deposits (Rubbish, Litter, Lot)	$200.00
Clearing Deposit (Accessory Bldg, Debris, Material	$200.00
Lot Clearing	
Administrative Fee	$100.00
Tree Removal	$70.00
Debris Charge	$110 per ton

Exhibit H

Code Enforcement

	Fee
Mow Vacant Lot	$0.05 per sq. yd.
Mow Lot with Structure	$0.055 per sq. yd.
Mow Acreage	$70 per acre
Mowing Fee	$0.10 per sq. yd.
Special Project	$165.00
Minimum Lot Charge	$45.00
Tires	Reimbursemt+$2.00/tire
Electrical Fees	
Minimum Fee	$50.00
Temporary Service	$50.00
Temporary Construction Pole	$50.00
Parking Lot Wiring	$50.00
Building Wiring	$0.05 per sq.ft
Service Change	$50.00
Sign Electrical Fee	$50.00
Electrical Fixture Fee (for first, $1.00 each after)	$15.00
Mobile Home Rewiring ($5 for each add'l)	$50.00
Clearance for Elec Connect/Disconnect Residential	$50.00
Reinspection (Red Tag)	$50.00
Mechanical Fees (when not part of bldg.permit)	
Minimum Fee	$50.00
Inspection for Heating, AC,Venting,Ductwork,Fridge ($5 for each add'l inspection)	$50.00
Fire Extinguishing Permit	$50.00
Boiler Inspections (33K to 1165 BTU)	$50.00
Boiler Inspections (1165K to 3300 BTU)	$50.00
Boiler Inspections (over 3300 BTU)	$50.00
Reinspection (Red Tag)	$50.00
Gas Fees (when not part of bldg.permit)	
Minimum Fee	$50.00
Floor Furnace, Boiler	$50.00
Vented Recessed Heater	$50.00
Gas line service	$50.00
Vented Appliance ($10 each add'l)	$50.00
Temporary Connection	$50.00
Reinspection (Red Tag)	$50.00
Plumbing Fees (when not part of bldg.permit)	
Minimum Fee	$50.00
Furnace, unit or wall heater ($10 each add'l)	$50.00
Water heater ($10 each add'l)	$50.00
Water softener	$50.00
Lawn Sprinkler	$50.00

Exhibit H

Code Enforcement

	Fee
Water Line Service	$50.00
Sewer Line Service	$50.00
Replumb Bldg	$0.05 Sq. Ft.
Fire Sprinker	$0.05 Sq. Ft.
Backflow Assembly Device ($10 each add'l)	$50.00
Reinspection (Red Tag)	$30.00
Vendor Permit	
Vendor Permit	$100.00
Water Well Fee	
Drill new well	$50.00
Reinspection Fee	
Reinspection (All Permits)	$100.00
Application to Board of Appeals	
Application	$200.00
Public Ways and Property	
House moving permit fee	$25.00
Network Nodes-5 in same application	$500.00
Each additional node in application	$250.00
Node Support Pole Application	$1,000.00
Fee to attach network node to public ROW pole	$20.00

Exhibit I

Engineering

	Fee
Traffic	
Street Name and Traffic Control Sign Fee	$500/intersection
Right of Way Use Permit Fee	$350.00

Exhibit J

Water & Sewer Fees

	Fee (as of July 1, 2020)
Water Rates Inside City:	
Base Rate for All Except Apartments for First 2,000 gallons	$21.61
Base Rate for Apartments per Unit for first 2,000 gallons per Unit	$17.60
Rate per 1,000 gallons over base of 2,000 up to 10,000	$6.11
Rate per 1,000 gallons from 10,001 up to 25,000	$8.03
Rate per 1,000 gallons from 25,001 up to 50,000	$10.80
Irrigation)	$13.50
Sewer Rates Inside City:	
All Customers Base Rate (First 2,000 gallons)	$21.79
All Customers Rate per 1,000 after Base Rate	$0.88
Water Rates Outside City:	
Base Rate for All Except Apartments for First 2,000 gallons	$32.42
Base Rate for Apartments per Unit for first 2,000 gallons per Unit	$26.40
Rate per 1,000 gallons over base of 2,000 up to 10,000	$9.17
Rate per 1,000 gallons from 10,001 up to 25,000	$12.05
Rate per 1,000 gallons from 25,001 up to 50,000	$16.20
Irrigation)	$20.25
Sewer Rates Outside City:	
Residential Base Rate (First 2,000 gallons)	$32.69
Residential Rate per 1,000 after Base Rate	$1.32
Miscellaneous:	
Septage waste hauler discharges and fees (per gallon)	$0.30

Exhibit K

Customer Service/Utility Billing

	Fee
Account Billing	
Residential Utility Deposit	$75.00
Re-read of Water Meter (2nd time)	$25.00
Test of Water Meter (2nd time)	$25.00
Non-sufficient fund check	$30.00
Reconnect-Disconnect fee	$30.00
Application Fee	$20.00
Transfer Fee	$20.00
Tampering/Straight Fee (1st time)	$200.00
Tampering/Straight Fee (2nd time)	$300.00
Water Meters & Tap Fees	
3/4" water meter-with existing meter box	$40.00
1" water meter-with existing meter box	$100.00
1" water meter tap (no paving cut or meter installation)	$390.00
1" service charge for tap and meter with meter box	$425.00
2" water meter- with existing meter box	$240.00
2" water meter tap (no paving cut or meter installation)	$564.00
2" service charge for tap and meter with meter box	$710.00
3" water meter	$375.00
4" water meter	$375.00
4" sewer tap	$350.00
6" sewer tap	$400.00
Replacement sewer tap (per line)	$300.00
Fee to abandon line for replacement	$150.00
Paving cut/Boring & Casing Fee	$400.00
Fire hydrant meter setting or moving	$200.00
Fire Hydrant meter deposit setting	$2,400.00
Drinking Water Testing- Total Coliform (Presence or absence)	$18.00
Non-Potable H2O testing- Total Coliform & E.Coli (MPN)	$25.00
Non-Potable H2O testing- Total Coliform & Fecal Coliform (MPN)	$25.00
Move a service line no more than 5 feet	$150.00

Exhibit L

Sanitation Fees

Inside City Limits

# of Containers	Number of pickups per week			
	2X	3X	4X	5X
Residential				
0.25	$18.82			
0.5	$37.64			
0.75	$56.46			
1	$75.28			
Commercial				
0.25	$25.17	$37.76	$50.34	$62.93
0.5	$50.34	$75.51	$100.68	$125.85
0.75	$75.51	$113.27	$151.02	$188.78
1	$100.67	$151.01	$201.34	$251.68
2	$191.27	$286.91	$382.55	$478.18
3	$281.88	$422.81	$563.75	$704.69
4	$372.48	$558.72	$744.96	$931.20
5	$463.08	$694.62	$926.16	$1,157.71
6	$553.69	$830.53	$1,107.37	$1,384.21
7	$644.29	$966.43	$1,288.58	$1,610.72
8	$734.89	$1,102.34	$1,469.78	$1,837.23
9	$825.49	$1,238.24	$1,650.99	$2,063.74
10	$916.10	$1,374.15	$1,832.19	$2,290.24
11	$1006.70	$1,510.05	$2,013.40	$2,516.75
12	$1,097.30	$1,645.95	$2,194.61	$2,743.26
13	$1,187.91	$1,781.86	$2,375.81	$2,969.77
14	$1,278.51	$1,917.76	$2,557.02	$3,796.27
15	$1,369.11	$2,053.67	$2,738.22	$3,422.78
16	$1,459.72	$2,189.57	$2,919.43	$3,649.29
17	$1,550.32	$2,325.48	$3,100.64	$3,875.80
18	$1,640.92	$2,461.38	$3,281.84	$4,102.30
19	$1,731.52	$2,597.29	$3,463.05	$4,328.81
20	$1,822.13	$2,733.19	$3,644.25	$4,555.32
21	$1,912.73	$2,869.10	$3,825.46	$4,781.83
22	$2,003.33	$3,005.00	$4,006.67	$5,008.33
23	$2,093.94	$3,140.90	$4,187.87	$5,234.84
24	$2,184.54	$3,276.81	$4,369.08	$5,461.35
25	$2,275.14	$3,412.71	$4,550.28	$5,687.86
Per Month				
Recycling fee	$0.50			
Litter Abatement Fee	$1.00			

Exhibit L

Sanitation Fees

Outside City Limits - Sanitation Fees

# of Containers	Number of pickups per week			
	2X	3X	4X	5X
Residential				
0.25	$28.23			
0.5	$56.46			
0.75	$84.69			
1	$112.92			
Commercial				
0.25	$37.76	$56.63	$75.51	$94.39
0.5	$75.51	$113.27	$151.02	$188.78
0.75	$113.27	$169.90	$226.53	$283.16
1	$151.04	$226.56	$302.08	$377.60
2	$286.98	$430.46	$573.95	$717.44
3	$422.91	$634.37	$845.82	$1,057.28
4	$558.85	$838.27	$1,117.70	$1,397.12
5	$694.78	$1,042.18	$1,389.57	$1,736.96
6	$830.72	$1,246.08	$1,661.44	$2,076.80
7	$966.66	$1,449.98	$1,933.31	$2,416.64
8	$1,102.59	$1,653.89	$2,205.18	$2,756.48
9	$1,238.53	$1,857.79	$2,477.06	$3,096.32
10	$1,374.46	$2,061.70	$2,748.93	$3,436.16
11	$1,510.40	$2,265.60	$3,020.80	$3,776.00
12	$1,646.34	$2,469.50	$3,292.67	$4,115.84
13	$1,782.27	$2,673.41	$3,564.54	$4,455.68
14	$1,918.21	$2,877.31	$3,836.42	$4,795.52
15	$2,054.14	$3,081.22	$4,108.29	$5,135.36
16	$2,190.08	$3,285.12	$4,380.16	$5,475.20
17	$2,326.02	$3,489.02	$4,652.03	$5,815.04
18	$2,461.95	$3,692.93	$4,923.90	$6,154.88
19	$2,597.89	$3,896.83	$5,195.78	$6,494.72
20	$2,733.82	$4,100.74	$5,467.65	$6,834.56
21	$2,869.76	$4,304.64	$5,739.52	$7,174.40
22	$3,005.70	$4,508.54	$6,011.39	$78,514.24
23	$3,141.63	$4,712.45	$6,283.26	$7,854.08
24	$3,277.57	$4,916.35	$655.14	$8,193.92
25	$3,413.50	$5,120.26	$6,827.01	$8,533.76

Exhibit L

Sanitation Fees

Open Top/Compactor Fees	
One-time set up fee (Delivery fee)	$33.81 + Tax
Daily Rental	$6.76 + Tax
Haul Charge	$169.13 + Tax
Per Ton Disposal Fee (Landfill Charge)	$42.00 per

Removal of Garbage by Other Entity	
Garbage Hauler's Permit	$500.00

Landfill- Dumping and Unloading Charges	
Landfill Access Fee-	$25.00
Unlimited Landfill Access Fee-year	$500.00
Minimum Fee under 1 Ton	$21.00
Per ton Disposal Fee	$42.00
Materials not contained	$15.00
Pull off Fee	$75.00
Special Waste/Minor or TDH permit	
Special Waste Fee- Per Ton	$84.00
Minimum Fee under 1 Ton	$42.00

Exhibit M

Airport

	Fee
Landing Fees (per 1000 pounds of gross landing weight)	$0.70
Air carrier fees (per 1000 pounds of gross landing weight)	$0.70
Public Aircraft parking – locally based aircraft (month)	$25.00
Public Aircraft parking – transient aircraft (day)	$1.50
Customer Facility Charge - vehicle rentals (per transaction day)	$3.00
Public Parking – CI (Covered)	
0-30 minutes	Free
31-60 minutes	$3.00
Every additional hour	$2.00
Maximum per 24-hour period	$15.00
Public Parking – P1 & P3 (Close-In)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$12.00
Public Parking – P2 &P4 (Economy)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$9.00
Public Parking – C2 (Remote Covered)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$11.00
Public Parking – P5 (Remote Economy)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$7.00
Ground Transportation Permits -per month, per vehicle	
Taxicab	$25.00
Buses	$25.00
Courtesy vehicles for off-aiport hotel	$25.00
Courtesy vehicles for off-aiport car rental (plus 10% airport revenue)	$25.00
Courtesy vehicles for off-aiport parking lot (plus 10% airport revenue)	$25.00
Employee Parking	

Exhibit M

Airport

	Fee
Annual Employee Parking media (prorated monthly)	$40.00

Special assessments

1. Should any person upon driving a vehicle from the paid parking areas of the airport not be able to present an officially issued ticket indicating where that person's vehicle was parked and at what time, then the charge assessed for the parking of that vehicle shall be at least $12.00. In addition to that fee, there shall also be a fee assessed for the parking of that vehicle equal to the amount of the daily rate, times number of days, for the area in which that vehicle was parked as is indicated by the daily lot inventory taken by the airport administration.
2. Whenever a person or an entity shall pay for the parking fees assessed by this Section with a check or draft, and that check or draft is dishonored, then there shall be an additional $25.00 assessed against that person or entity.

Exhibit N

Sports Complex

	Fee
Football/Soccer Stadium	
Sporting Events	
Half Stadium Rental	$1,500.00/day
Whole Stadium Rental	$3,000.00/day
Non-Sporting Events	
Non-Profit Deposit	$1,500.00
Non-Profit Rental	$1,500.00/day
Commercial Deposit	$2,500.00
Commercial Rental	$2,500.00/day
Cleaning Fees	
Less than 2,000 people	$1,500/side
More than 2,000 people	$2,500/side
Lighting Fee	$75.00/hour
Baseball Stadium	
Baseball Events	$750.00/day
Non-Baseball Events	
Non-Profit Deposit	$1,000.00
Non-Profit Rental	$1,000.00/day
Commercial Deposit	$1,500.00
Commercial Rental	$1,500/day
Cleaning Fees assessed by Midland Rockhounds	
Lighting Fee	$75.00/hour
Groundskeeper and Grounds Material Fees assessed by Midland Rockhounds	
Diamon Club Deposit	$100.00
Diamond Club Rental (minimum 2 hours)	$50.00/hour
Diamond Club Cleaning Fee (payable to Midland Rockhounds)	$150.00
OPERATOR FEES FOR BASEBALL AND FOOTBALL/SOCCER STADIU	**Hourly**
Video Board Operator	$50.00
Scoreboard Operator	$50.00
PA Announcer	$50.00
Camera Operator	$45.00
Replay Technician	$45.00
Sound Operator	$45.00
SSC - Common Area/Parking Lot Rentals	
Pavilion	
Non-Profit Deposit	$1,500.00
Non-Profit Rental	$1,500/day
Commercial Deposit	$2,000.00
Commercial Rental	$2,000/day

Parking Lot Only	
Parking Lot Deposit	$1,000.00
Set Up/Tear Down	$1,000/day
Rental Fee	$1,500/day
Cleaning Fees - Common Area/Parking Lot Rentals	
Less than 1,000 people	$1,000.00
1,001 to 2,500 people	$1,500.00
More than 2,500 people	$2,000.00
Lighting Fee	$75.00/hour
SSC - Auxiliary Fields	
Non-Tournament Fees	
Deposit	$100.00
Field Rental	$50.00/hour
Tournament Fees	
Deposit	$100.00/field
Rental	$30.00/game
Cleaning Fee	$150.00/field
Lighting Fee	$25.00/hour
Concession Stand Deposit	$100.00
Concession Stand Rental	$25.00/hour

Exhibit O

Miscellaneous

	Fee
Court Fees	
Municipal Court Building Security Fee	$3.00
Municipal Court Technology Fee	$4.00
Municipal Court Copy Fee	$1.00 per page
Business Regulations	
Closing out sale license fees - 30 days	$100.00
Closing out sale license fees - 60 days	$125.00
Closing out sale license fees - 90 days	$150.00
Peddler license	$4.00
Mobile Home/Travel Trailer Park App Fee	$10.00
Mobile Home/Travel Trailer Park License	$25 plus $1 ea.space
Mobile Home Mini Park location app	$10.00
Mobile Home Mini Park revised site plan	$10.00
City Chauffeur's license app fee	$25.00
Airport Cabstand Permit fee (per month)	$25.00
Special police officer license fee (individual)	$10.00
Special police officer license fee (firm)	$50.00
Carnival operator's license	$50.00
Carnival employee's license	$6.00
Side walk sale application fee	$4.00
Police Regulations	
Ambulance Services- Basic Life Support	$650 + $10 per mile
Ambulance Services- Advanced Life Support	$750 + $10 per mile
Ambulance Services- Advanced Level II	$850 + $10 per mile
Ambulance Waiting Charge	$200 per hour
Ambulance Service- Outside Midland County	$100.00
Food Truck Fire Inspection	$50 per inspection annually
Alarm Permit Application Fee-Commercial	$25.00
Alarm Permit Application Fee-Residential	$20.00
Alarm Permit Renewal Fee -Commercial	$20.00
Alarm Permit Renewal Fee - Residential	$15.00
Alarm Permit Service fee	$50.00
Franchises	
Telecomm Carrier on public ROW Reg. Fee-	$25.00
Franchise application and review fee	$500.00
Franchise renewal application and review fee	$500.00

INTEROFFICE MEMORANDUM

TO: **Christy Weakland, Finance Director**

FROM: **Jeffery Ahrlett, Director of Solid Waste**

SUBJECT: **Update Sanitation Fee Ordinance**

DATE: **June 29, 2022**

CC: **Tina Jauz, Assistant City Manager**

Staff is seeking city council approval of an update to the current Sanitation Fee Ordinance. This includes the approval of a 2% increase in sanitation rates and a 20% increase in Landfill Tonnage rates.

- $.37 per month increase to residential rates
- $7.08 per ton increase at the Landfill

The proposed rates remain among the lowest in comparison to other municipalities with similar services. See attached table.

Increased revenue from the proposed sanitation collection rates would yield approximately an additional $200,000.00 and an additional $1,500,000.00 in Landfill tonnage collection.

The proposed rates would be effective October 1, 2022.

CITY OF MIDLAND

Community Services Department
Scharbauer Sports Complex Division
Interoffice Memorandum

Date: July 14, 2022
To: Morris Williams, Deputy City Manager
From: Cristina Burns, Community Services Director
Subject: Proposed Fee Changes for Community Services

The Community Services Department has reviewed the fee schedules for each division and is proposing some changes to better serve our community. The proposed changes are outlined below:

Animal Services

The proposed fee changes for Animal Services are requested to cover shelter costs. The main change is the adoption fee. Currently, the total cost to adopt an animal is $62; however, those fees for adoption (which includes the micro-chip), rabies vaccination, and license are separate. We are now proposing to change the adoption fee to $50 for cats and $75 for dogs, but that cost would include license, microchip, vaccinations, and sterilization. Below are some other proposed changes:

<u>New fees</u>

Rescue fee (rabies, microchip, license)	*$32*
Rabies	*$10 special event/$20 regular*
Rabies and booster vaccination	*$15 special event*
Pickup Fee – Owner release (additional animal)	*$5/each*
Drop off Fee – Owner Release	*$10*

<u>Proposed changes</u>

Impoundment 1st Offense (unaltered)	*$50 decrease*
Impoundment 2nd Offense (unaltered)	*$25 decrease*
**currently all impoundment fees for unaltered animals were the same for each offense*	
Boarding (per day)	*$2 increase*
Quarantine fees	*$2 increase per day*
Home Quarantine Fees	*$2 increase per day*
Pickup Fee – Deceased	*$5 increase*
Pickup Fee – Dead Small Livestock	*$50 increase*
Pickup Fee – Decease Large Livestock	*$75 increase*
Rabies Specimen Fee	*$30 increase to cover shipping expenses*

Microchips	*$2 decrease*
Pet License (yearly)	*remove special event fee*

Fees removed

Rabies Specimen Prep Fee of $15	*Now included in Rabies Specimen Fee*

Golf Course

Historically, Golf Course fees were changed when new golf carts were purchased, which is every three years. However, when new golf carts were purchased in 2021, the fees were not increased. We are proposing a $1 increase for every fee, except for the Green Fee for Juniors, which will remain the same at $9.50. These proposed increases will cost the average player an additional $1.89 but will increase our revenue by approximately $101,000.

Health Services

The proposed fee changes for Health Services are to cover new costs of vaccines and tests as well as the addition of new vaccine. Below are the proposed changes:

New fee

Heplisav-Adult Hep B	*$125*

Proposed changes

Proquad (MMR & Varicella)	*$5 increase*
Varicella	*$5 increase*
HPV 9	*$15 increase*
Trumenba (Meningococcal Group B)	*$15 increase*
Bexsero (Meningococcal Group B)	*$55 increase*
Adult Hep A	*$10 increase*
Shingrix (Shingles)	*$5 increase*
STD Testing	*$5 increase*
HIV Testing	*$5 increase*
STD Clinic Treatment	*$5 increase*
STD Clinic Retreatment	*$5 increase*
TB Clinic	*$5 increase*

Parks

We added several new fees, including Baseball/Softball field rentals, Football/soccer field rentals, concession rentals, and a rental fee for the Ulmer San Volleyball Court for the Parks Division. These fees are being proposed to cover costs associated with maintaining these fields and facilities. We also consolidated the pavilion rentals for Beal and Wadley-

Barron Parks. Below are the proposed changes:

New fees

Baseball/Softball Field Rentals	
Artificial Turf Field Rental Fee	*$50/hour*
Natural Turf Field Rental Fee	*$25/hour*
Lights	*$25 hour*
Tournament Fee	*$25/team*
Football/Soccer Field Rentals	
Artificial Turf Field Rental Fee	*$50/hour*
Natural Turf Field Rental Fee	*$25/hour*
Lights	*$25 hour*
Tournament Fee	*$30/game*
Concession Rentals	
Deposit	*$100*
Rental fee	*$25/hour*
Ulmer Sand Volleyball Court	
Deposit	*$25*
Rental fee	*$25/day*

Proposed changes

Temp Fencing – Rental Fee (per panel)	*$10 increase/day*
Showmobile- Rental Fee (minimum of 4 hours)	*same hourly fee but removed the 4-hour increments*

Recreation

The proposed changes for Recreation are to cover costs. We also removed the Auxiliary Fields rental fees from this schedule and moved them to the Sports Complex schedule. Below are the proposed changes:

New fees

Water	*$2*
Swim lesson (1 week)	*$20*

Proposed changes

Soda	*$1 increase*
Snacks	*$2 increase*
Private Rentals – Deposit	*$100 decrease*

Private Rentals – Rental Fee (2 hours)	*$150 increase*
MLK Activity Room with Gameroom During Operation	*$15 increase/hour*
MLK Gymnasium During Operation	*$15 increase/hour*
MLK Gymnasium After Hours	*$10 increase*

Fees removed

Life Jacket Deposit	*No longer required*
Auxiliary Fields	*Moved to Sports Complex Schedule*

Sports Complex

As the original rates for the Sports Complex were adopted in 2002, we are proposing changes that are more practical for current rentals of the facility as well as to better cover our janitorial and maintenance costs. The average increase for football/soccer stadium, baseball stadium, and common area/parking rentals is between $500-1,000. We have also added operator fees for baseball and football/soccer stadium rentals and concession stand rentals and moved the Auxiliary Field rentals to this schedule from the Recreation schedule. Below are the proposed changes:

New fees

Operator Fees for Baseball and Football/Soccer Stadiums	
Video Board Operator	*$50/hour*
Scoreboard Operator	*$50/hour*
PA Announcer	*$50/hour*
Camera Operator	*$45/hour*
Replay Technician	*$45/hour*
Sound Operator	*$45/hour*

Proposed changes

Football/Soccer Stadium	
Sporting Events	
Half Stadium Rental	*$1,500/day*
Whole Stadium Rental	*$3,000/day*
Non-Sporting Events	
Non-Profit Deposit	*$1,500*
Non-Profit Rental	*$1,500/day*
Commercial Deposit	*$2,500*
Commercial Rental	*$2,500/day*
Cleaning Fees	
Less than 2,000 people	*$1,500/side*
More than 2,000 people	*$2,500/side*
Lighting Fee	*$75/hour*

Baseball Stadium	
Baseball Events	*$750/day*
Non-Baseball Events	
Non-Profit Deposit	*$1,000*
Non-Profit Rental	*$1,000/day*
Commercial Deposit	*$1,500*
Commercial Rental	*$1,500/day*
Cleaning Fees assessed by Midland Rockhounds	
Lighting Fee	*$75/hour*
Groundskeeper and Grounds Material Fees assessed by Midland Rockhounds	
Diamond Club Deposit	*$100*
Diamond Club Rental	*$50/hour*
(minimum of 2 hours)	
Diamond Club Cleaning Fee	*$150*
(payable to Midland Rockhounds)	
SSC – Common Area/Parking Lots	
Pavilion	
Non-Profit Deposit	*$1,500*
Non-Profit Rental	*$1,500/day*
Commercial Deposit	*$2,000*
Commercial Rental	*$2,000/day*
Parking Lot Only	
Parking Lot Deposit	*$1,000*
Set Up/Tear Down	*$1,000/day*
Rental Fee	*$1,500/day*
Cleaning Fees	
Less than 1,000 people	*$1,000*
1,001 to 2,500 people	*$1,500*
More than 2,500 people	*$2,000*
Lighting Fee	*$75/hour*
SSC – Auxiliary Fields	
Non-Tournament Fees	
Deposit	*$100*
Field Rental	*$50/hour*
Tournament Fees	
Deposit	*$100/field*
Rental	*$30/game*
Cleaning Fee	*$150/field*
Lighting Fee	*$25/hour*
Concession Stand Deposit	*$100*
Concession Stand Rental	*$25/hour*

Exhibit A

City Secretary

	Fee
Business Regulations	
Junk and secondhand goods license	$25.00
Renewal of junk and secondhand good	$10.00
Alcoholic Beverage License Fee	1/2 of State Fee
Taxicab annual operating fee (each)	$200.00
Limo or Motorbus operating fee (each)	$100.00
Passports	
Execution Fee (DS-11)	$35.00
Renewal Mailing Fee (DS-82)	$10.00
Passport Photograph	$18.00
Expedited Shipping Fee (DS-11)	$26.40
Expedited Shipping Fee (DS-82)	$32.95
Notarization Fee	$10.00
Copies	$0.25

Exhibit B

Parks

	Fee
TEMP FENCING	
Deposit	$200.00
Rental Fee (per panel)	$20/day
SHOWMOBILE	
Deposit	$1,000.00
Rental Fee (minimum of 4 hours)	$62.50/hour
Extensions	$100.00
Show Lights	$200.00
PORTABLE BLEACHERS	
Deposit	$100.00
Rental Fee (per day)	$100.00
PORTABLE STAGE	
Deposit	$100.00
Rental Fee	$100.00
TRASH CANS	
Deposit	$100.00
Rental Fee (minimum of 10 cans)	$5.00/can/day
PARK PAVILION RENTAL	
Deposit	$100.00
Rental Fee 9am-10pm	$60.00
Rental Fee 9am-3pm	$30.00
Rental Fee 4pm-10pm	$40.00
BEAL RANCH HOUSE	
Deposit no Alcohol	$300.00
Deposit w/Alcohol	$500.00
Rental Fee Per Hour	$50.00
GAZEBO RENTALS - WADLEY AND BEAL	
Deposit	$100.00
Rental Fee 9 am- 3 pm	$50.00
Rental Fee 4 pm-10 pm	$50.00
Rental Fee 9 am-10 pm	$100.00
BASEBALL/SOFTBALL FIELD RENTALS	
Artifical Turf Fields Rental Fee	$50.00/hour
Natural Turf Field Rental Fee	$25.00/hour
Lights	$25.00/hour
Tournament Fee	$25.00/team
FOOTBALL/SOCCER FIELD RENTALS	
Artifical Turf Fields Rental Fee	$50.00/hour
Natural Turf Field Rental Fee	$25.00/hour
Lights	$25.00/hour
Tournament Fee	$30/game
CONCESSION RENTALS	
Concession Stand Deposit	$100.00
Concession Stand Rental	$25.00/hour

ULMER SAND VOLLEYBALL COURT	
Deposit	$25.00
Rental Fee	$25.00/day
WHITEHOUSE RENTAL	
Deposit	$200.00
Rental Fee 10 am - 4 pm	$200.00
Rental Fee 6 pm - 12 am	$200.00
Rental Fee All Day	$400.00

Exhibit C

Recreation

		Fee
CITY POOL RATES		
Entry Fee		$3.00
Children under 2		Free
10 Punch Card		$15.00
25 Punch Card		$35.00
75 Punch Card		$75.00
Personal Cooler Admission		$10.00
Soda		$3.00
Water		$2.00
Snacks		$2.00
Swim lesson (1 week)		$20.00
Life Jacket Rental		$1.00
PRIVATE RENTALS		
DEPOSIT		$150.00
RENTAL FEE (2 hours)		$850.00
POOL PAVILION RENTALS		
(Doug Russell Only)		
DEPOSIT		$100.00
RENTAL FEE		$100/session
MARTIN LUTHER KING RECREATION CENTER	per hour	
Activity Room		
During Operation		$25.00
After Hours		$35.00
Deposit		$100.00
Activity Rm/with Gameroom	per hour	
During Operation		$50.00
After Hours		$70.00
Deposit		$300.00
Auditorium	per hour	
During Operation		$50.00
After Hours		$75.00
Deposit No Alcohol		$500.00
Deposit Alcohol		$750.00
Gymnasium	per hour	
During Operation		$40.00
After Hours		$60.00
Deposit		$200.00
MLK Volleyball Net Setup Fee		$15.00
Training Room	per hour	

Exhibit C

Recreation

	Fee
Sporting Events ONLY	
During Operation	$50.00
After Hours	$75.00
Deposit	$1,000.00
Daily Entrance Fee	$1.00
Monthly Membership	$15.00
MOVIE SCREEN	
Deposit	$1,000.00
Fee (Maximum 4 hours)	$500.00
BUBBLE SOCCER AT MLK Gym Only	
Deposit	$300.00
During Hrs	$100/hour
After Hours	$125/hour
Bubble Soccer at MLK Gym/Activity Rm	
Deposit	$300.00
During Hrs	$125/hour
After Hours	$135/hour
BUBBLE SOCCER AT MLK Gym/Act Rm/Game Rm	
Deposit	$300.00
During Hrs	Not Avaliable
After Hours	$170/hour
BUBBLE SOCCER NOT @MLK	
Deposit	$500.00
Fee (minimum of 2 hours)	$200/hour

Exhibit D

Health and Senior Services

	Fee
Environmental Section	
Mobile Food Vendor	
Mobile Food Vendor	$175.00
Mobile Food (Seasonal)	$105.00
Temporary Permit	$70.00
Food Services Establishments	
1 thru 5 employees	$150.00
6 thru 10 employees	$200.00
11 or more employees	$250.00
Deli/Meat Market/Bakery	$75.00
Farmers Market	$50.00
Retail Food Store	
1 thru 5 employees	$150.00
6 thru 10 employees	$200.00
11 or more employees	$250.00
Temporary Permit	$70.00
Child Care Programs	
Day Care	$100.00
Foster Care	$50.00
Child Care Program for after School	$50.00
Swimming Pool, Spa, or Water Feature Permit	
Swimming Pool or Spa Permit	$100.00
Water Feature Permit	$100.00
Non-Profit Yearly	$30.00
Non-Profit Temporary	$30.00
Re-inspection (When Establishment is shut down)	$75.00
Septic System Inspections	
Septic System Residential	$150.00
Septic System Commercial	$210.00
Septic re-inspection (When fails initial inspection)	$50.00
Late Fee (When not paid by specified date)	25% of Permit Fee
Clinical Section	
Health Department Services	
DTaP	$45.00
Kinrix (DTaP & Polio)	$100.00
Pentacel (DTaP & Polio & Flu Type B)	$140.00
IPV (Polio)	$50.00
Pedi HEP A	$40.00
Pedi HEP B	$35.00
HIB (Flu Type B)	$40.00

Exhibit D

Health and Senior Services

	Fee
Vaxelis (DTaP, HIB, Polio & HEB B)	$150.00
Rototeq/Rotarix (Rotavirus)	$140.00
Proquad (MMR & Varicella)	$255.00
PCV 13 (Pneumococcal Conjugate)	$260.00
PPSV23 (Pneumococcal Conjugate)	$145.00
MMR	$90.00
Varicella	$155.00
TD (Tetanus & Diptheria)	$50.00
TDAP (Tetanus Diptheria and Pertussis)	$60.00
HPV 9	$255.00
MCV4 (Meningitis)	$150.00
Menqaudfi (Meningitis)	$200.00
Trumenba (Meningococcal Group B)	$155.00
Bexsero (Meningococcal Group B)	$185.00
Adult Hep A	$70.00
Adult Hep B	$65.00
Heplisav-Adult Hep B	$125.00
Shingrix (Shingles)	$175.00
Infant flu	$25.00
Flu	$30.00
High Dose Flu	$65.00
Flublok	$60.00
Yellow Fever	$130.00
STD Testing	$15.00
HIV Testing	$15.00
STD Clinic Treatment	$15.00
STD Clinic Retreatment	$15.00
Pregnancy Test-Urine	$10.00
Pregnancy Test - Blood	$15.00
TB Test	$15.00
TB Clinic	$15.00
Administration Fees	
Insured	$25.00
TVFC 1=$10, 2=$20, >or= 3 = $30	
Refugee	$0.00
Medicaid/CHIP	$14.85
Medicare Flu or Pneumonia	$25.00

Exhibit E

Animal Services

	Fee
Adoption Fees	
Adoption Fees (includes micro chipping)	$50 for Cats; $75 for Dogs
Ducks, Rabbits, Other	$5.00
Rescue Fee (rabies, microchip, license)	$32.00
Humane Coalition Transfer Fee (with micro chipping) Range $17 to $25	$25.00
Animal Service Discount	$6.73
Vaccines and Medical Fees	
Rabies ($10 special event and $20 reg)	$10.00 or $20.00
Rabies and Booster ($15 special event)	$15.00
Impoundment Fees	
Impoundment - 1st Offense (altered)	$25.00
Impoundment - 1st Offense (unaltered)	$50.00
Impoundment - 2nd Offense (altered)	$50.00
Impoundment - 2nd Offense (unaltered)	$75.00
Impoundment - 3rd+ Offense (altered)	$60.00
Impoundment - 3rd+ Offense (unaltered)	$100.00
Livestock Impoundment	$100.00
Boarding & Quarantine	
Boarding (per day)	$8.00
Quarantine Fees (minimum of 10 days)	$10.00/day
Home Quarantine Fees (minimum of 10 days)	$5.00/day
Pick-up Fees	
Pickup Fee - Owner release	$15.00
Pickup Fee -Owner release (additional animals)	$5.00/each
Pickup Fee - Deceased	$15.00
Pickup Fee - Dead Small Livestock	$75.00
Pickup Fee- Deceased Livestock	$150.00
Transfer to Vet Fee	$15.00
Miscellaneous Fees	
Drop off Fee - Owner release	$10.00
Rabies Specimen Shipping	$75.00
Wild Animal Permit	$25.00
Dangerous Dog Yearly Registration	$50.00
Off Leash Training Permit	$5.00
Microchipping	
Microchips	$8.00
Pet Services	
Flea/Tick Preventative	$15.00
Euthanasia	
Euthanasia	$15.00
Pet Licenses	
Pet License (yearly)	$7.00

Pet License (replacement)	$1.00
Pigeons	
Loft Permit for Pigeons	$3.00
Renewal of Loft Permit	$2.00

Exhibit F

Golf Course

	Fee
Green Fee - Weekday	$21.25
Green Fee - Weekdays after 4:00	$12.25
Green Fee - Weekend	$26.25
Green Fee - Weekend after 4:00	$16.00
Weekend AM - 9 Holes	$15.00
Green Fee - Senior	$16.25
Green Fee - Junior	$9.50
Cart Fee (90%)	$13.75

Exhibit G

Planning

	Fee
Preliminary Plat Application	
Sketch Plan Application (1st review)	$225.00
Sketch Plan Application (2nd review)	$100.00
Preliminary Plat Application (up to 50 acres)	$350.00
Preliminary Plat Application (over 50 acres)	$500.00
Final Plat Application	
Standard Plat or Residential Up to 50 acres	$350.00
Standard Plat or Residential over 50 acres Max	$500.00
Administrative Plat	$250.00
Digital File Conversion Fee	$50.00
Recording Fees- Plats up to 18"x24"	$61.00
Recording Fees- Plats over 18"x24"	$81.00
Related Documents	$26.00
Replat	
Replat with Public Hearing	$250.00
Replat without Public Hearing	$250.00
Annexation/Zone Change Application	
Standard Zone Change	$500.00
Planned District Zone Change	$650.00
Multiple PD Proposal Basic	$550.00
Multiple PD Proposal Per Additional District	$100.00
Additional PD Regulations	$75.00
Site Plan in PDF Format for City Council	$50.00
Application Fee	$500.00
Zoning Board of Appeal Fee	$600.00
Special Exception Application Fee	$500.00
Oil and Gas	
Application for Oil and Gas Permit	$4,000.00
Credit Access Businesses	
Application Fee	$50.00
Specific Use Permit (SUP) / Specific Use Designation (SUD)	
Application for SUP/SUD with Term for Alcoholic Beverage	$300.00
Application for General SUP/SUD	$400.00
Renewal SUP/SUD	$75.00
Temporary Mobile Home	
Special Temporary Permit for Manufactured Home App (Based on Genuine Hardship Condition)	$50.00
Special Temporary Permit for Manufactured Home App (For Occupancy by a Caretaker, Manager, or Guard)	$100.00
Temporary Land Use	
Application Fee	$300.00
For each additional event date	$25.00
Clean-Up Deposit	$500.00

Exhibit G

Planning

		Fee
	Damage Deposit	$500.00
	Outside sale of dogs	$20.00
Site Plan Review		
	Single PD Amendment	$550.00
	Multiple PD Amendment	$650.00
Dedications		
	Review Fee	$400.00
Vacation		
	Application Fee	$400.00
Creation of a Building Site		
	Application Fee	$400.00
Master Sign Plan		
	Application Fee	$300.00
Traffic Impact		
	Traffic Impact (Staff Study)	$350.00
	Traffic Impact (Review of Submittal)	$600.00
Portable Storage Containers		
Freight or Portable storage cont.- permit fee		$125.00
	Each add'l on same property	$25.00
90- day permit fee for storage container		$150.00
	Each add'l container	$25.00
45- day permit fee for storage container		$125.00
	Each add'l container	$25.00
30 day permit fee for storage container		$75.00
Certificate of occupancy and compliance		
Certificate of occupancy and compliance		$10.00

Exhibit H

Code Enforcement

	Fee
Building Permits	
Construction Permit Fee	31.5 cents per square foot
Sidewalk/ROW Residential (No building permit)	$50.00
Sidewalk/ROW Commercial (No building permit)	$200.00
Street Improvement Fee	23 cents per square foot
Fence Fee	$50.00
Manufactured Home	$200.00
Manufactured Home Skirting Deposit	$100.00
Moving Fee	$200.00
Non-Profit Residential	$150.00
Temporary Structure	$100.00
Detached Assessory (120Sq.ft or less)	$50.00
Detached Assessory (120Sq.ft to 200 sq.ft.)	$100.00
Demolition Permits	
Commercial Demo Fee - Building	$500.00
Commerical Demo Fee - Interior	$100.00
Residential or Accessory Bldg	$50.00
Temporary Sign Permits	
Permanent Sign Permits	$50.00
Temporary sign annual permit fee	$50.00
Failure to remove sign- hauling fee	$50.00
Failure to remove sign- daily storage fee	$10.00
Oil & Gas Drilling Permits	
Amendment Fee	$1,000.00
Certification Fee & Inspection	$300.00
Oil & Gas Application Fee	$4,000.00
Well Tranfer Fee	$500.00
***TX State HB-40 recognizes Ordinance 8769 including fees and may not be amended**	
Mobile Home Park Licenses	
Mobile Home Park Licenses	$25.00 plus $1 ea/addl
Certificate of Occupancy	
Certificate of Occupancy	$50.00
Lot Deposits	
Clearing Deposits (Floor & Foundation) Commercial	$2,000.00
Clearing Deposits (Floor & Foundation) Residential	$600.00
Clearing Deposits (Rubbish, Litter, Lot)	$200.00
Clearing Deposit (Accessory Bldg, Debris, Material	$200.00
Lot Clearing	
Administrative Fee	$100.00
Tree Removal	$70.00
Debris Charge	$110 per ton

Exhibit H

Code Enforcement

	Fee
Mow Vacant Lot	$0.05 per sq. yd.
Mow Lot with Structure	$0.055 per sq. yd.
Mow Acreage	$70 per acre
Mowing Fee	$0.10 per sq. yd.
Special Project	$165.00
Minimum Lot Charge	$45.00
Tires	Reimbursemt+$2.00/tire
Electrical Fees	
Minimum Fee	$50.00
Temporary Service	$50.00
Temporary Construction Pole	$50.00
Parking Lot Wiring	$50.00
Building Wiring	$0.05 per sq.ft
Service Change	$50.00
Sign Electrical Fee	$50.00
Electrical Fixture Fee (for first, $1.00 each after)	$15.00
Mobile Home Rewiring ($5 for each add'l)	$50.00
Clearance for Elec Connect/Disconnect Residential	$50.00
Reinspection (Red Tag)	$50.00
Mechanical Fees (when not part of bldg.permit)	
Minimum Fee	$50.00
Inspection for Heating, AC,Venting,Ductwork,Fridge ($5 for each add'l inspection)	$50.00
Fire Extinguishing Permit	$50.00
Boiler Inspections (33K to 1165 BTU)	$50.00
Boiler Inspections (1165K to 3300 BTU)	$50.00
Boiler Inspections (over 3300 BTU)	$50.00
Reinspection (Red Tag)	$50.00
Gas Fees (when not part of bldg.permit)	
Minimum Fee	$50.00
Floor Furnace, Boiler	$50.00
Vented Recessed Heater	$50.00
Gas line service	$50.00
Vented Appliance ($10 each add'l)	$50.00
Temporary Connection	$50.00
Reinspection (Red Tag)	$50.00
Plumbing Fees (when not part of bldg.permit)	
Minimum Fee	$50.00
Furnace, unit or wall heater ($10 each add'l)	$50.00
Water heater ($10 each add'l)	$50.00
Water softener	$50.00
Lawn Sprinkler	$50.00

Exhibit H

Code Enforcement

	Fee
Water Line Service	$50.00
Sewer Line Service	$50.00
Replumb Bldg	$0.05 Sq. Ft.
Fire Sprinker	$0.05 Sq. Ft.
Backflow Assembly Device ($10 each add'l)	$50.00
Reinspection (Red Tag)	$30.00
Vendor Permit	
Vendor Permit	$100.00
Water Well Fee	
Drill new well	$50.00
Reinspection Fee	
Reinspection (All Permits)	$100.00
Application to Board of Appeals	
Application	$200.00
Public Ways and Property	
House moving permit fee	$25.00
Network Nodes-5 in same application	$500.00
Each additional node in application	$250.00
Node Support Pole Application	$1,000.00
Fee to attach network node to public ROW pole	$20.00

Exhibit I

Engineering

	Fee
Traffic	
Street Name and Traffic Control Sign Fee	$500/intersection
Right of Way Use Permit Fee	$350.00

Exhibit J

Water & Sewer Fees

	Fee (as of July 1, 2020)
Water Rates Inside City:	
Base Rate for All Except Apartments for First 2,000 gallons	$21.61
Base Rate for Apartments per Unit for first 2,000 gallons per Unit	$17.60
Rate per 1,000 gallons over base of 2,000 up to 10,000	$6.11
Rate per 1,000 gallons from 10,001 up to 25,000	$8.03
Rate per 1,000 gallons from 25,001 up to 50,000	$10.80
Irrigation)	$13.50
Sewer Rates Inside City:	
All Customers Base Rate (First 2,000 gallons)	$21.79
All Customers Rate per 1,000 after Base Rate	$0.88
Water Rates Outside City:	
Base Rate for All Except Apartments for First 2,000 gallons	$32.42
Base Rate for Apartments per Unit for first 2,000 gallons per Unit	$26.40
Rate per 1,000 gallons over base of 2,000 up to 10,000	$9.17
Rate per 1,000 gallons from 10,001 up to 25,000	$12.05
Rate per 1,000 gallons from 25,001 up to 50,000	$16.20
Irrigation)	$20.25
Sewer Rates Outside City:	
Residential Base Rate (First 2,000 gallons)	$32.69
Residential Rate per 1,000 after Base Rate	$1.32
Miscellaneous:	
Septage waste hauler discharges and fees (per gallon)	$0.30

Exhibit K

Customer Service/Utility Billing

	Fee
Account Billing	
Residential Utility Deposit	$75.00
Re-read of Water Meter (2nd time)	$25.00
Test of Water Meter (2nd time)	$25.00
Non-sufficient fund check	$30.00
Reconnect-Disconnect fee	$30.00
Application Fee	$20.00
Transfer Fee	$20.00
Tampering/Straight Fee (1st time)	$200.00
Tampering/Straight Fee (2nd time)	$300.00
Water Meters & Tap Fees	
3/4" water meter-with existing meter box	$40.00
1" water meter-with existing meter box	$100.00
1" water meter tap (no paving cut or meter installation)	$390.00
1" service charge for tap and meter with meter box	$425.00
2" water meter- with existing meter box	$240.00
2" water meter tap (no paving cut or meter installation)	$564.00
2" service charge for tap and meter with meter box	$710.00
3" water meter	$375.00
4" water meter	$375.00
4" sewer tap	$350.00
6" sewer tap	$400.00
Replacement sewer tap (per line)	$300.00
Fee to abandon line for replacement	$150.00
Paving cut/Boring & Casing Fee	$400.00
Fire hydrant meter setting or moving	$200.00
Fire Hydrant meter deposit setting	$2,400.00
Drinking Water Testing- Total Coliform (Presence or absence)	$18.00
Non-Potable H2O testing- Total Coliform & E.Coli (MPN)	$25.00
Non-Potable H2O testing- Total Coliform & Fecal Coliform (MPN)	$25.00
Move a service line no more than 5 feet	$150.00

Exhibit L

Sanitation Fees

Inside City Limits

# of Containers	Number of pickups per week			
	2X	3X	4X	5X
Residential				
0.25	$18.82			
0.5	$37.64			
0.75	$56.46			
1	$75.28			
Commercial				
0.25	$25.17	$37.76	$50.34	$62.93
0.5	$50.34	$75.51	$100.68	$125.85
0.75	$75.51	$113.27	$151.02	$188.78
1	$100.67	$151.01	$201.34	$251.68
2	$191.27	$286.91	$382.55	$478.18
3	$281.88	$422.81	$563.75	$704.69
4	$372.48	$558.72	$744.96	$931.20
5	$463.08	$694.62	$926.16	$1,157.71
6	$553.69	$830.53	$1,107.37	$1,384.21
7	$644.29	$966.43	$1,288.58	$1,610.72
8	$734.89	$1,102.34	$1,469.78	$1,837.23
9	$825.49	$1,238.24	$1,650.99	$2,063.74
10	$916.10	$1,374.15	$1,832.19	$2,290.24
11	$1006.70	$1,510.05	$2,013.40	$2,516.75
12	$1,097.30	$1,645.95	$2,194.61	$2,743.26
13	$1,187.91	$1,781.86	$2,375.81	$2,969.77
14	$1,278.51	$1,917.76	$2,557.02	$3,796.27
15	$1,369.11	$2,053.67	$2,738.22	$3,422.78
16	$1,459.72	$2,189.57	$2,919.43	$3,649.29
17	$1,550.32	$2,325.48	$3,100.64	$3,875.80
18	$1,640.92	$2,461.38	$3,281.84	$4,102.30
19	$1,731.52	$2,597.29	$3,463.05	$4,328.81
20	$1,822.13	$2,733.19	$3,644.25	$4,555.32
21	$1,912.73	$2,869.10	$3,825.46	$4,781.83
22	$2,003.33	$3,005.00	$4,006.67	$5,008.33
23	$2,093.94	$3,140.90	$4,187.87	$5,234.84
24	$2,184.54	$3,276.81	$4,369.08	$5,461.35
25	$2,275.14	$3,412.71	$4,550.28	$5,687.86
Per Month				
Recycling fee	$0.50			
Litter Abatement Fee	$1.00			

Exhibit L

Sanitation Fees

Outside City Limits - Sanitation Fees

# of Containers	Number of pickups per week			
	2X	3X	4X	5X
Residential				
0.25	$28.23			
0.5	$56.46			
0.75	$84.69			
1	$112.92			
Commercial				
0.25	$37.76	$56.63	$75.51	$94.39
0.5	$75.51	$113.27	$151.02	$188.78
0.75	$113.27	$169.90	$226.53	$283.16
1	$151.04	$226.56	$302.08	$377.60
2	$286.98	$430.46	$573.95	$717.44
3	$422.91	$634.37	$845.82	$1,057.28
4	$558.85	$838.27	$1,117.70	$1,397.12
5	$694.78	$1,042.18	$1,389.57	$1,736.96
6	$830.72	$1,246.08	$1,661.44	$2,076.80
7	$966.66	$1,449.98	$1,933.31	$2,416.64
8	$1,102.59	$1,653.89	$2,205.18	$2,756.48
9	$1,238.53	$1,857.79	$2,477.06	$3,096.32
10	$1,374.46	$2,061.70	$2,748.93	$3,436.16
11	$1,510.40	$2,265.60	$3,020.80	$3,776.00
12	$1,646.34	$2,469.50	$3,292.67	$4,115.84
13	$1,782.27	$2,673.41	$3,564.54	$4,455.68
14	$1,918.21	$2,877.31	$3,836.42	$4,795.52
15	$2,054.14	$3,081.22	$4,108.29	$5,135.36
16	$2,190.08	$3,285.12	$4,380.16	$5,475.20
17	$2,326.02	$3,489.02	$4,652.03	$5,815.04
18	$2,461.95	$3,692.93	$4,923.90	$6,154.88
19	$2,597.89	$3,896.83	$5,195.78	$6,494.72
20	$2,733.82	$4,100.74	$5,467.65	$6,834.56
21	$2,869.76	$4,304.64	$5,739.52	$7,174.40
22	$3,005.70	$4,508.54	$6,011.39	$78,514.24
23	$3,141.63	$4,712.45	$6,283.26	$7,854.08
24	$3,277.57	$4,916.35	$655.14	$8,193.92
25	$3,413.50	$5,120.26	$6,827.01	$8,533.76

Exhibit L

Sanitation Fees

Open Top/Compactor Fees	
One-time set up fee (Delivery fee)	$33.81 + Tax
Daily Rental	$6.76 + Tax
Haul Charge	$169.13 + Tax
Per Ton Disposal Fee (Landfill Charge)	$42.00 per

Removal of Garbage by Other Entity	
Garbage Hauler's Permit	$500.00

Landfill- Dumping and Unloading Charges	
Landfill Access Fee-	$25.00
Unlimited Landfill Access Fee-year	$500.00
Minimum Fee under 1 Ton	$21.00
Per ton Disposal Fee	$42.00
Materials not contained	$15.00
Pull off Fee	$75.00
Special Waste/Minor or TDH permit	
Special Waste Fee- Per Ton	$84.00
Minimum Fee under 1 Ton	$42.00

Exhibit M

Airport

	Fee
Landing Fees (per 1000 pounds of gross landing weight)	$0.70
Air carrier fees (per 1000 pounds of gross landing weight)	$0.70
Public Aircraft parking – locally based aircraft (month)	$25.00
Public Aircraft parking – transient aircraft (day)	$1.50
Customer Facility Charge - vehicle rentals (per transaction day)	$3.00
Public Parking – CI (Covered)	
0-30 minutes	Free
31-60 minutes	$3.00
Every additional hour	$2.00
Maximum per 24-hour period	$15.00
Public Parking – P1 & P3 (Close-In)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$12.00
Public Parking – P2 &P4 (Economy)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$9.00
Public Parking – C2 (Remote Covered)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$11.00
Public Parking – P5 (Remote Economy)	
0-30 minutes	Free
31-60 minutes	$2.00
Every additional hour	$1.00
Maximum per 24-hour period	$7.00
Ground Transportation Permits -per month, per vehicle	
Taxicab	$25.00
Buses	$25.00
Courtesy vehicles for off-aiport hotel	$25.00
Courtesy vehicles for off-aiport car rental (plus 10% airport revenue)	$25.00
Courtesy vehicles for off-aiport parking lot (plus 10% airport revenue)	$25.00
Employee Parking	

Exhibit M

Airport

	Fee
Annual Employee Parking media (prorated monthly)	$40.00

Special assessments

1. Should any person upon driving a vehicle from the paid parking areas of the airport not be able to present an officially issued ticket indicating where that person's vehicle was parked and at what time, then the charge assessed for the parking of that vehicle shall be at least $12.00. In addition to that fee, there shall also be a fee assessed for the parking of that vehicle equal to the amount of the daily rate, times number of days, for the area in which that vehicle was parked as is indicated by the daily lot inventory taken by the airport administration.
2. Whenever a person or an entity shall pay for the parking fees assessed by this Section with a check or draft, and that check or draft is dishonored, then there shall be an additional $25.00 assessed against that person or entity.

Exhibit N

Sports Complex

	Fee
Football/Soccer Stadium	
Sporting Events	
Half Stadium Rental	$1,500.00/day
Whole Stadium Rental	$3,000.00/day
Non-Sporting Events	
Non-Profit Deposit	$1,500.00
Non-Profit Rental	$1,500.00/day
Commercial Deposit	$2,500.00
Commercial Rental	$2,500.00/day
Cleaning Fees	
Less than 2,000 people	$1,500/side
More than 2,000 people	$2,500/side
Lighting Fee	$75.00/hour
Baseball Stadium	
Baseball Events	$750.00/day
Non-Baseball Events	
Non-Profit Deposit	$1,000.00
Non-Profit Rental	$1,000.00/day
Commercial Deposit	$1,500.00
Commercial Rental	$1,500/day
Cleaning Fees assessed by Midland Rockhounds	
Lighting Fee	$75.00/hour
Groundskeeper and Grounds Material Fees assessed by Midland Rockhounds	
Diamon Club Deposit	$100.00
Diamond Club Rental (minimum 2 hours)	$50.00/hour
Diamond Club Cleaning Fee (payable to Midland Rockhounds)	$150.00
OPERATOR FEES FOR BASEBALL AND FOOTBALL/SOCCER STADIU	**Hourly**
Video Board Operator	$50.00
Scoreboard Operator	$50.00
PA Announcer	$50.00
Camera Operator	$45.00
Replay Technician	$45.00
Sound Operator	$45.00
SSC - Common Area/Parking Lot Rentals	
Pavilion	
Non-Profit Deposit	$1,500.00
Non-Profit Rental	$1,500/day
Commercial Deposit	$2,000.00
Commercial Rental	$2,000/day

Parking Lot Only	
Parking Lot Deposit	$1,000.00
Set Up/Tear Down	$1,000/day
Rental Fee	$1,500/day
Cleaning Fees - Common Area/Parking Lot Rentals	
Less than 1,000 people	$1,000.00
1,001 to 2,500 people	$1,500.00
More than 2,500 people	$2,000.00
Lighting Fee	$75.00/hour
SSC - Auxiliary Fields	
Non-Tournament Fees	
Deposit	$100.00
Field Rental	$50.00/hour
Tournament Fees	
Deposit	$100.00/field
Rental	$30.00/game
Cleaning Fee	$150.00/field
Lighting Fee	$25.00/hour
Concession Stand Deposit	$100.00
Concession Stand Rental	$25.00/hour

Exhibit O

Miscellaneous

	Fee
Court Fees	
Municipal Court Building Security Fee	$3.00
Municipal Court Technology Fee	$4.00
Municipal Court Copy Fee	$1.00 per page
Business Regulations	
Closing out sale license fees - 30 days	$100.00
Closing out sale license fees - 60 days	$125.00
Closing out sale license fees - 90 days	$150.00
Peddler license	$4.00
Mobile Home/Travel Trailer Park App Fee	$10.00
Mobile Home/Travel Trailer Park License	$25 plus $1 ea.space
Mobile Home Mini Park location app	$10.00
Mobile Home Mini Park revised site plan	$10.00
City Chauffeur's license app fee	$25.00
Airport Cabstand Permit fee (per month)	$25.00
Special police officer license fee (individual)	$10.00
Special police officer license fee (firm)	$50.00
Carnival operator's license	$50.00
Carnival employee's license	$6.00
Side walk sale application fee	$4.00
Police Regulations	
Ambulance Services- Basic Life Support	$650 + $10 per mile
Ambulance Services- Advanced Life Support	$750 + $10 per mile
Ambulance Services- Advanced Level II	$850 + $10 per mile
Ambulance Waiting Charge	$200 per hour
Ambulance Service- Outside Midland County	$100.00
Food Truck Fire Inspection	$50 per inspection annually
Alarm Permit Application Fee-Commercial	$25.00
Alarm Permit Application Fee-Residential	$20.00
Alarm Permit Renewal Fee -Commercial	$20.00
Alarm Permit Renewal Fee - Residential	$15.00
Alarm Permit Service fee	$50.00
Franchises	
Telecomm Carrier on public ROW Reg. Fee-	$25.00
Franchise application and review fee	$500.00
Franchise renewal application and review fee	$500.00

City Council Meeting

Item Number: 16

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Landon Ochoa, Planner

Subject: AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 1, BLOCK 1, BUSH TENNIS CENTER ADDITION, AND LOT 4, BLOCK 1, CROSS POINTE ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR A RECREATION CENTER, IN PART, AND MF-16, MULTIPLE-FAMILY DWELLING DISTRICT, IN PART, TO LR, LOCAL RETAIL DISTRICT (GENERALLY LOCATED ON THE NORTH SIDE OF BRIARWOOD AVENUE, APPROXIMATELY 2,000 FEET WEST OF HOLIDAY HILL ROAD); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT 4) (DEVELOPMENT SERVICES)

Purpose:

The applicant, Newton Engineering, PC, is requesting a zone change from PD, Planned Development District for a Recreation Center in part and MF-16, Multiple-Family Dwelling District in part to LR, Local Retail District located at 5700 Briarwood for future development.

Recommended City Council Action:

Approve

Fiscal Impact:

This request does not require any City funds.

Current Zoning:

PD, Planned Development District for a Recreation Center in part and MF-16, Multiple-Family Dwelling District in part.

Surrounding Zoning and Land Use:

The properties to the north are zoned LR, Local Retail District. The property to the east is zoned MF-16, Multiple-Family Dwelling District. The property to the south is zoned PD, Planned Development District for a Housing Development. The Properties to the west are zoned ETJ, Extraterritorial Jurisdiction, and the location of vacant land.

Discussion:

The applicant, Newton Engineering, PC, is requesting a zone change from PD, Planned Development District for a Recreation Center in part and MF-16, Multiple-Family Dwelling District in part to LR, Local Retail District located at 5700 Briarwood for future development. The property meets the minimum lot size requirements for the LR, Local Retail District.

The applicant will be required to adhere to the site plan review standards outline within the City of Midland Zoning Ordinance Section 5.05; Non-residential Zoning District Dimensional Regulation Chart as well as Chapter 9, Landscape Regulations for future landscaping.

This proposed zone change has been circulated to the respective City departments for internal review and their comments, conditions, and requirements are as follows:

Fire: (Approved)

No objections

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2020 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary. Code versions are subject to change depending on time of new code edition adoption in the City of Midland and date of permit application.

Engineering: (Approved)

No objections to zone change. [For the Applicant’s information only.]

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For Applicant’s Information Only.]

Code: (Approved)

No Oil and Gas Issues. Informational: No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat inside the City Limits. There is no jurisdiction of those wells in the county. Please note if oil & gas wells are not identified or left off of plat, this could prevent receiving city permits for structures. Any plugged and abandoned well would need to be identified.

Transportation: (Approved)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For the Applicant's information only.] No objection to zone change. [For the Applicant's information only.]

Planning:

This request is in compliance with the Tall City Tomorrow Comprehensive Plan, Chapter 3 An Integrated Land Use Vision, "Future Land Use Map" as it designates this area for Urban Medium, which calls for a mix of housing types, neighborhood and community commercial, office, and service uses.

This request was recommended for approval at the July 18, 2022, Planning and Zoning Commission meeting.

Therefore, staff recommends approval of this zone change from PD, Planned Development District for a Recreation Center in part and MF-16, Multiple-Family Dwelling District in part to LR, Local Retail District, subject to condition A.

Conditions:

A. **That the use and development of this property shall conform to the regulations of the LR, Local Retail District.**

Letters of Objection:

Staff has not received any letters of objection as of August 3, 2022.

Attachments:

Application
Sit Plan (Exhibit A)
Maps

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE ZONING DISTRICT MAP OF THE CITY OF MIDLAND TO REZONE LOT 1, BLOCK 1, BUSH TENNIS CENTER ADDITION, AND LOT 4, BLOCK 1, CROSS POINTE ADDITION, SECTION 2, CITY AND COUNTY OF MIDLAND, TEXAS, FROM PD, PLANNED DEVELOPMENT DISTRICT FOR A RECREATION CENTER, IN PART, AND MF-16, MULTIPLE-FAMILY DWELLING DISTRICT, IN PART, TO LR, LOCAL RETAIL DISTRICT (GENERALLY LOCATED ON THE NORTH SIDE OF BRIARWOOD AVENUE, APPROXIMATELY 2,000 FEET WEST OF HOLIDAY HILL ROAD); CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter, the City Code, and State law, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by rezoning Lot 1, Block 1, Bush Tennis Center Addition, and Lot 4, Block 1, Cross Pointe Addition, Section 2, City and County of Midland, Texas (the "Property") to LR, Local Retail District, as set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the Zoning District Map of the City of Midland, Texas, is hereby amended to rezone the Property from PD, Planned Development District for a Recreation Center, in part, and MF-16, Multiple-Family Dwelling District, in part, to LR, Local Retail District.

SECTION TWO. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are

used herein.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2022; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the

following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

MIDLAND
Planning Division

Zone Change/Planned District Amendment/Site Plan Approval

Project Number: 2-22-0296

Case Number:

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Newton Engineering, PC		Phone (432)770-0499 Email john@newtoncivil.com	
Address 4501A Santa Rosa Dr.	City Midland	State TX	Zip 79707

Property Owner Midland Tennis Center, Inc Printed Name:		Phone ( ) Email tim@bushtenniscenter.org	
Address PO Box 4914	City Midland	State TX	Zip 79704

Representative *(if different from Applicant or Property Owner)* Firm: Newton Engineering, PC Printed Name: John M. Newton		Phone (432)770-0499 Email john@newtoncivil.com	
Address 4501A Santa Rosa Dr.	City Midland	State TX	Zip 79707

Street Address: 5700 Briarwood Dr.

Legal Description
Lot: 1&4 Block: 1 Subdivision: Bush Tennis Center & Cross Pointe Addition Section 2

Current Zoning: PD and MF16	**Proposed Zone:** LR *(List by tracts if more than one district is requested)*

Reason for Zone Change Request: To conform to development.

Present Use of Property: Tennis Facility

Proposed Use of Property: Tennis Facility and Performance Center

How would this zone change affect the public health, safety and welfare?
It will enhance by facilitating outdoor fitness activities.

Describe how conditions affecting the property have changed since present zoning designation: The zoning code has be rewritten.

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

RECEIVED
JUN 22 2022
CF

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature): John M. Newton	Date: 6-21-22
Applicant (printed): John M. Newton	
Property Owner (signature):	Date: 6-1-22
Property Owner (printed) : Timothy M. Stallard	

The Zone Change/Planned District Amendment/Site Plan Approval shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appear Timothy Stallard who, being by me duly sworn, upon oath says: That (s)he is the owner of Rush Tennis Center or authorized by Rush Tennis Center the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Authorized Agent (*signature*)

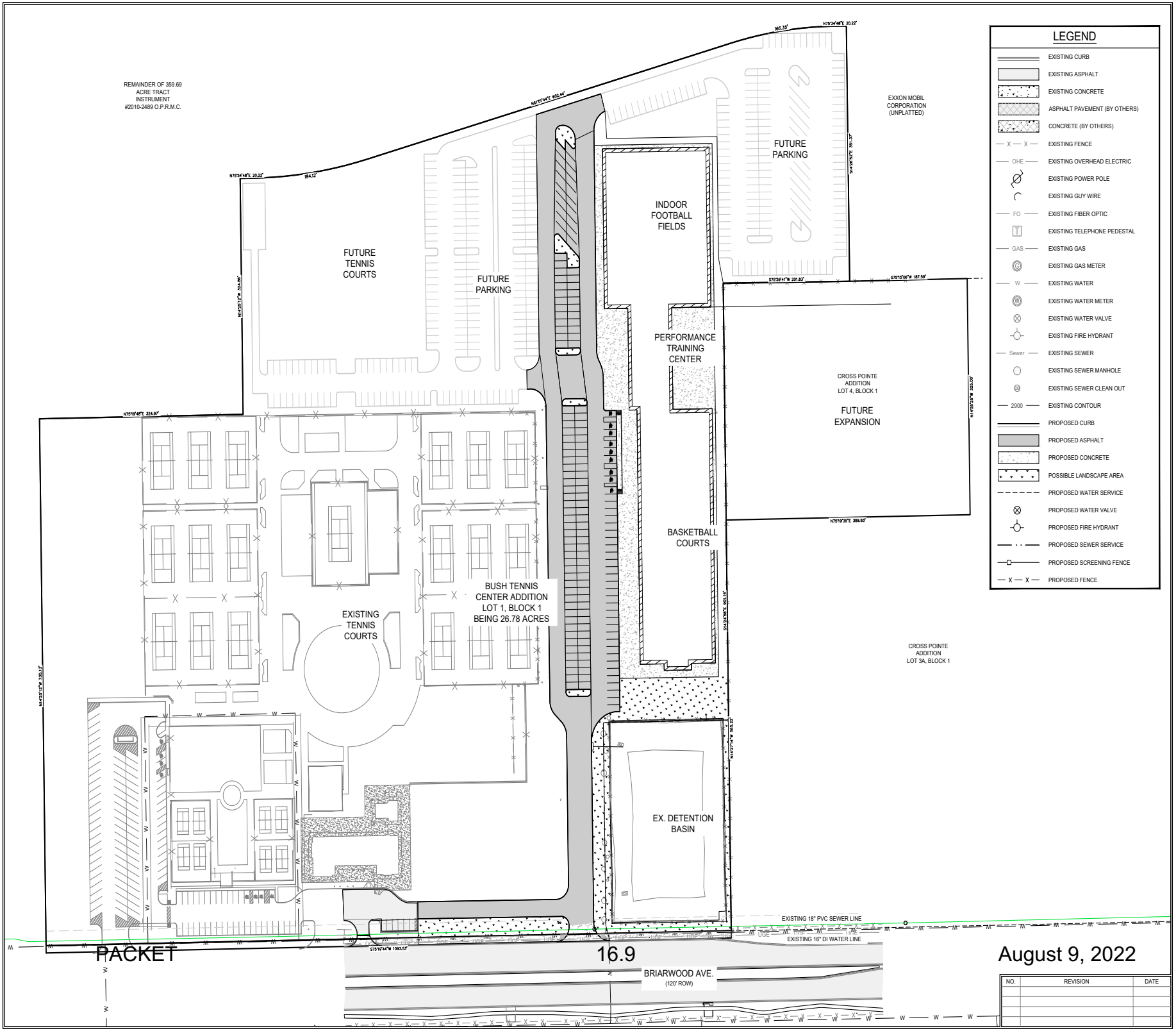
Subscribed and sworn to before me, this 1 day of June, 2022, to certify which witness my hand and seal of office.

TYLER M. PENDLETON
My Notary ID # 126594656
Expires July 18, 2024

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY	
☑ Property Owner Authorization	☑ Dimensioned Site Plan
☑ Application Fee	☑ Plans in Digital Format (PDF/JPEG)
Check # 1276	
Received By: Lola Ferguson	Date: 6-22-22

****Application will not be considered for scheduling until reviewed by a planner.****



GRAPHIC SCALE
0 60' 120'
(IN FEET)
1 inch = 60 ft.

NEWTON ENGINEERING, PC
2500 E. 8th St.
Odessa, Texas 79761
(432) 580-0707
F-13856
4501A Santa Rosa Dr.
Midland, Texas 79707
(432) 770-0469

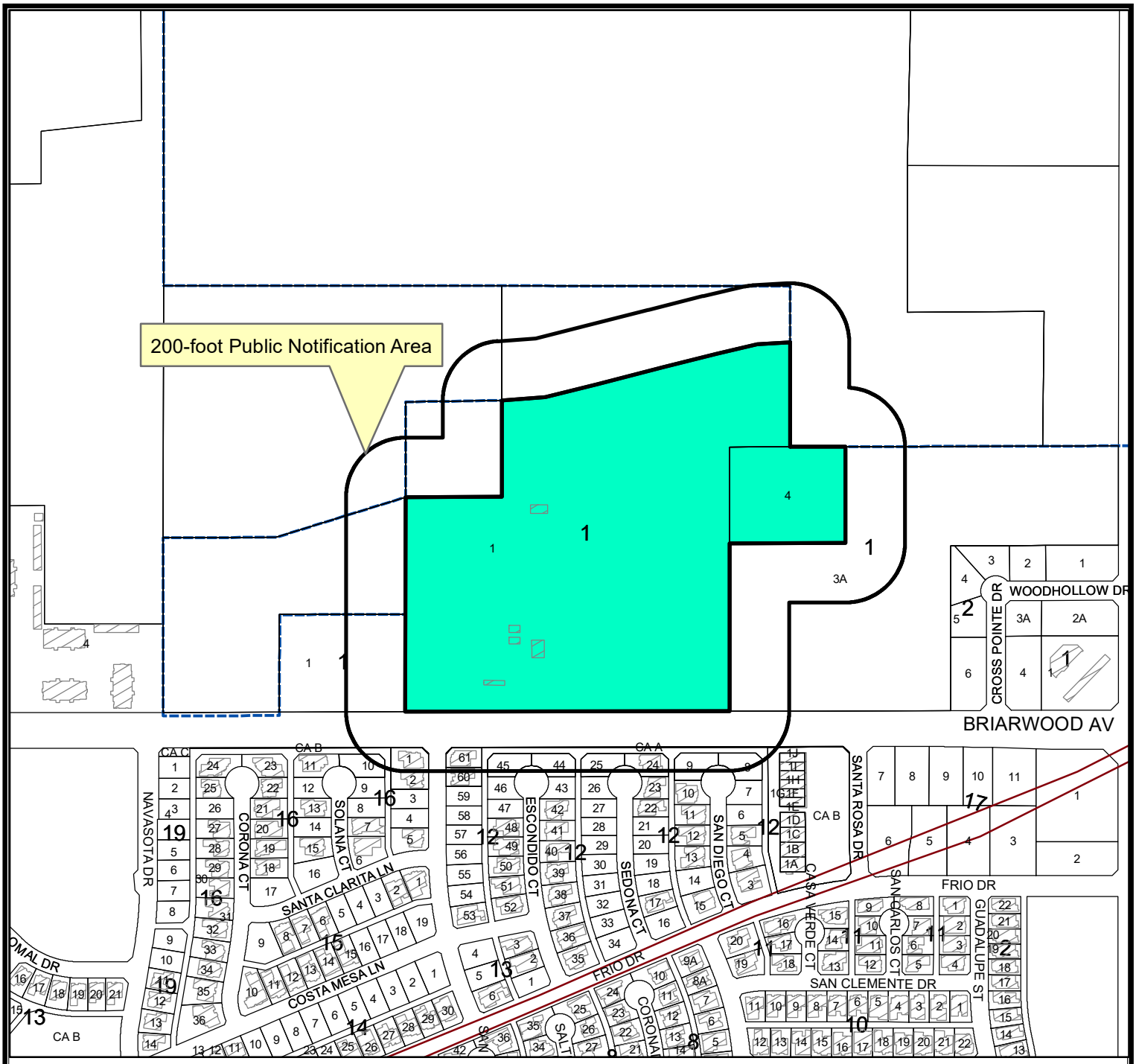
BUSH TENNIS CENTER
MIDLAND, TX

MASTER PLAN

PACKET 16.9 August 9, 2022

NO.	REVISION	DATE

Project No.	22-ME02041	Sheet:	
Date:	APRIL 2022		
Drawn By:			
Checked By:	JMN		04
Scale:			



LOCATION MAP

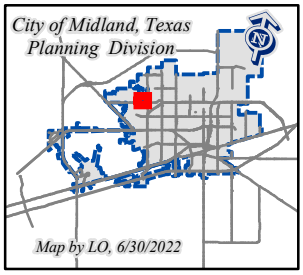
Z-22-0296 **Scale: 1" = 5,781'**

Consider a request by Newton Engineering, PC for a zone change from PD, Planned Development District for a Recreation Center in part and MF-16, Multiple-Family Dwelling District in part, to LR, Local Retail District, out of Lot 1, Block 1, Bush Tennis Center, and Lot 4, Block 1, Cross Pointe Addition, Section 2, City and County of Midland, Texas.

Generally located on the north side of Briarwood Street, approximately 2,000-feet west of Holiday Hill. (Council District 4)

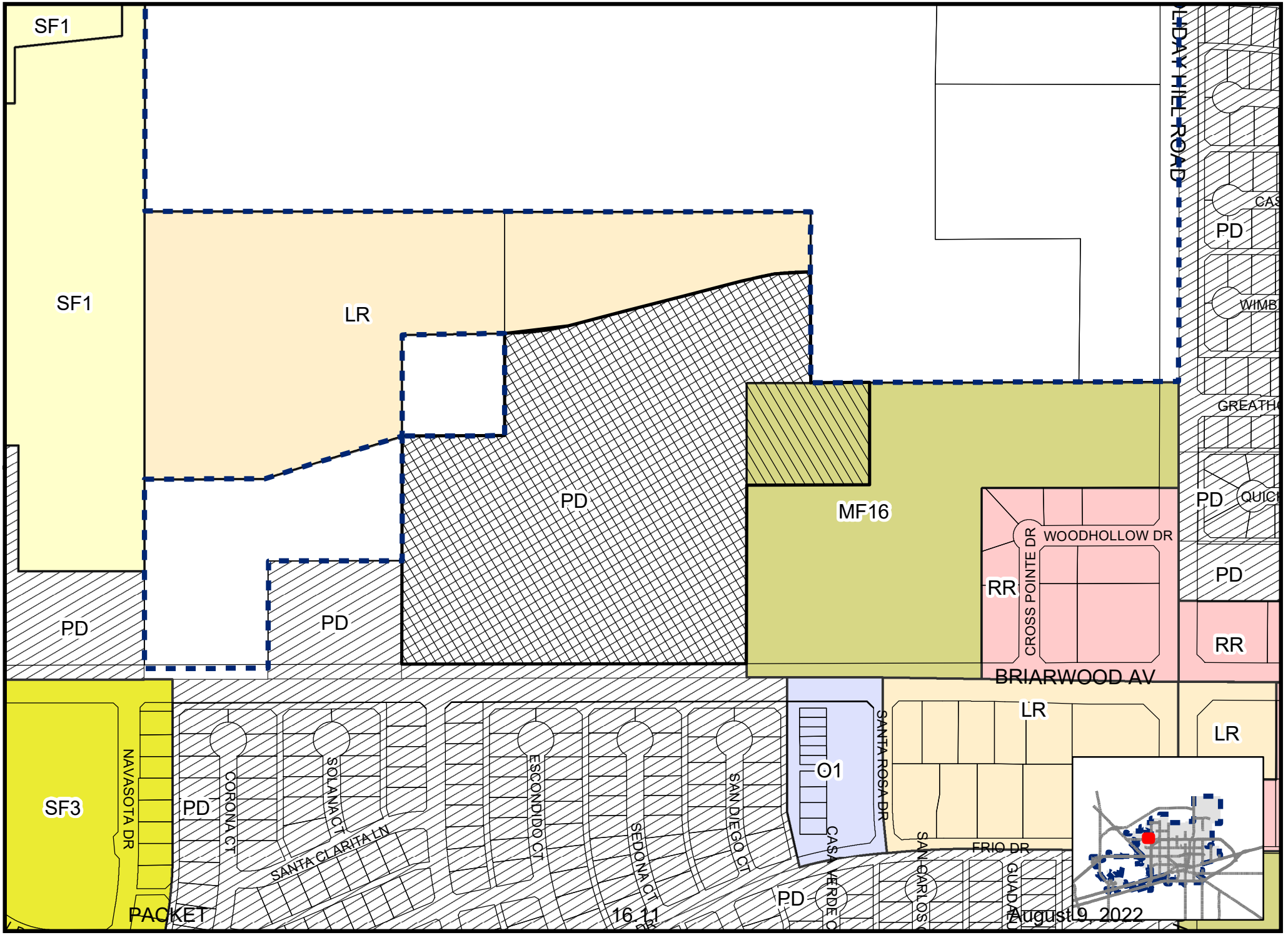
LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



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THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

August 9, 2022



Map By LO, 6/30/2022

Z-22-0296

Scale: 1" = 4,574'

ZONING MAP

© THE CITY OF MIDLAND - 2021: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.











ORDINANCE NO. 8848

AN ORDINANCE CHANGING THE ZONING CLASSIFICATION BY AMENDING CHAPTER ONE, TITLE XI, OF THE CITY CODE OF MIDLAND, TEXAS, BY PERMITTING A 27.04-ACRE TRACT OF LAND OUT OF SECTION 24, BLOCK 40, T-1-S, T&P RR CO. SURVEY, CITY AND COUNTY OF MIDLAND, TEXAS, AND MORE SPECIFICALLY DESCRIBED IN SECTION ONE HEREOF, WHICH IS PRESENTLY ZONED FD, FUTURE DEVELOPMENT DISTRICT, TO BE USED AS A PD, PLANNED DISTRICT FOR A RECREATION CENTER (GENERALLY LOCATED ON THE NORTH SIDE OF BRIARWOOD AVENUE, APPROXIMATELY 1,300 FEET WEST OF HOLIDAY HILL ROAD); PROVIDING FOR SUCH USE TO BE SUBJECT TO CERTAIN SPECIAL CONDITIONS AND RESTRICTIONS AS SET OUT HEREIN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, the City Planning and Zoning Commission and the Governing Body of the City of Midland, in compliance with the City Charter and the State law with reference to the creation of "Planned Districts" under the zoning ordinance regulations and zoning map, have given the requisite notices by United States mail, publication and otherwise; and after a full and fair hearing to all of the property owners generally and particularly to those interested persons situated in the affected area and in the vicinity thereof, the Governing Body finds that the public health, safety and general welfare will be best served by the creation of a Planned District for a Recreation Center, set out hereinafter and subject to the conditions and restrictions set out hereinafter;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That Chapter 1, Title XI, of the City Code of Midland, Texas, and the official zoning map of the City of Midland, Texas, are hereby amended insofar as the hereinafter described property is concerned, which is presently zoned FD, Future Development District, and it shall be used as a Planned District for a Recreation Center, subject to the special conditions and restrictions hereinafter set out, said property being

described as follows:

A 27.04-acre tract of land out of Section 24, Block 40, T-1-S, T&P RR Co. Survey, City and County of Midland, Texas, said tract being more specifically described by metes and bounds in Exhibit "B", which is attached hereto and incorporated herein for all purposes.

SECTION TWO. That said property shall be subject to the following special conditions and restrictions:

1. That this property shall be subject to the regulations of the 1F-1, One-Family Dwelling District, except as otherwise stated below.

2. That the development of the property shall conform to the site plan which is attached hereto and incorporated herein as Exhibit "A".

3. That this property may be developed with tennis courts and associated facilities.

4. That food vending and limited retail may be conducted only as incidental to the recreational use of this property and only within areas designated by the site plan.

5. That the structure labeled on the site plan as "Classroom/Fitness" shall be completed within one (1) year of the issuance of the building permit for its construction.

6. That the placement of the industrialized structures labeled on the site plan as "Locker Room Buildings" shall be removed within seventy-two (72) months of the issuance of a building permit for the construction of the building labeled on the site plan as "Classroom/Fitness".

7. That the development of the structure labeled on the site plan as "Future Dressing/Pro Shop/Offices" shall be subject to future site plan review in the same manner as a zone change.

8. That all business signs shall conform to the requirements of the City of Midland's Sign Code.

9. That this property shall be platted before a building permit is issued.

10. That full cut-off lighting fixtures shall be utilized.

SECTION THREE. That the definitions given in the zoning regulations contained in the City Code of the City of Midland, Texas, shall be applicable to such of those terms as are used herein.

SECTION FOUR. The provisions of this ordinance are to be cumulative of all other

ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FIVE. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION SIX. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SEVEN. The Interim City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the 26th day of October, A.D., 2010; and passed to second reading on motion of Council member Trost, seconded by Council member Morales, by the following vote:

Council members voting "AYE": Morales, Trost, Hailey, Perry, James and Sparks

Council members voting "NAY": None

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member Morales, seconded by Council member Trost, on the 16th day of November, A.D., 2010, at a regular

meeting of the City Council:

Council members voting "AYE": Morales, Trost, Hailey, Dufford, James and Sparks

Council members voting "NAY": None

PASSED AND APPROVED THIS 16th day of November, A.D., 2010.

Mayor pro tem for

W. Wesley Perry, Mayor

ATTEST:

Amy M. Turner, Interim City Secretary

APPROVED AS TO FORM:

Keith Stretcher, City Attorney

D
32

City Council Agenda

Ordinance-Zoning-2010
Plan. 8848

Approved for Agenda:
CSharp
City Manager's Office

MEETING DATE: October 26, 2010

TO: CITY COUNCIL/CITY MANAGER

FROM: Cameron Walker, Planning Division Manager

SUBJECT: Z-10-018, LCA / Midland Tennis Center

Purpose:

Hold a public hearing at 10:36 a.m. and consider a request for a zone change from FD, Future Development District to PD, Planned District for a Recreation Center on a 27.04-Acre tract of land out of Section 24, Block 40, T-1-S, T & P RR CO. Survey, City and County of Midland, Texas.

Recommended City Council Action

☒ Approve ☐ Deny ☐ Direction/Informational

Fiscal Impact:

N/A

Discussion:

The Midland Tennis Center Inc. owns the property on the north side of Briarwood Avenue, just west of Holiday Hill Road. They are planning to construct an athletic facility which will serve as a hub for local and regional tennis events. This property has recently been annexed into the city limits and requires a zone change.

This facility falls under the classification of a "community-sponsored recreation center " and requires a 1F-1, One Family Dwelling District or less restrictive district. It will be a phased project and will feature practice courts, covered and uncovered full-size courts, classrooms, offices, fitness, limited retail (athletic equipment and apparel), storage, and food vending. Because of the diversity of the proposed use of this property and the phased nature of this project, staff is recommending the creation of a Planned District.

Because this project will be completed in phases, special consideration must be given as to how the sequential development of this property will affect the overall growth of the Briarwood Avenue Corridor.

Two key elements in this consideration include the structures labeled in Exhibit A as "Future Dressing/Pro Shop/Offices" and those labeled as "Locker Room Buildings." Presently, the Future Dressing/Pro Shop/Offices have not been designed and are planned as part of Phase 2. As this structure will be highly visible from Briarwood Avenue, staff recommends that future site plan approval be obtained for the general architecture prior to construction. Additionally, the applicant plans for the Locker Room Buildings to initially be Industrialized Structures. As the Midland Tennis Center reaches their long term goals, they plan to replace these buildings with permanent structures. Planned Districts typically include permanent buildings, but the Midland Tennis Center is not prepared at this time to design and construct these buildings. Therefore, staff recommends that these structures be permitted for a limited amount of time not exceeding six years.

As also illustrated in the attached site plan, ingress and egress will occur along Briarwood Avenue. This facility will exceed the City's Landscape Requirements and parking will be sufficient. The building materials used will include masonry and masonry wall veneer and on-site trash receptacles will be screened with building materials consistent with those used throughout the facility.

The Planning and Zoning Commission approved this request unanimously on October 4th, 2010.

Attachments: Application, Maps, Exhibit A - Site Plan

Planning and Zoning Commission Meeting
Minutes from October 4, 2010

Z-10-018 - Continue consideration of a *zone change* on a request by **Landgraf, Crutcher and Associates / Midland Tennis Center** from FD, Future Development District, to PD, Planned District for a Recreation Center on a 27.04-acre tract of land out of Section 24, Block 40, T-1-S, T&P RR Co. Survey, Midland County, Texas. (Generally located on the north side of Briarwood Avenue, approximately 1.300 feet west of Holiday Hill Road.)

Gary Vandergriff, principal of the Vandergriff Group Architects, presented the site plans on behalf of the Midland Tennis Center. Recognizing this location as a gateway into the City, he was careful to include design elements and landscaping to ensure an attractive, sustainable development. The group would seek a building permit upon completion of the site plan approval process. Brandon Melland, Planner, presented the staff report. City staff and the applicant worked extensively since this item first came before the Commission on September 7, 2010. A partnership with the Midland Independent School District tennis program has been developed. The staff recommends that the indicated temporary buildings be allowed for no longer than 72 months. The staff supports the amended site plans, subject to Conditions A-I in the Staff Recommendation.

A brief discussion occurred regarding the nature of exterior building materials and phasing of construction.

Vice-Chairman Ferguson called for a motion. Galen Gatten moved for approval, second by Kevin Wilton. The motion passed unanimously.

PLANNING AND ZONING COMMISSION

October 4, 2010

CASE: Z-10-018; LCA / Midland Tennis Center

REQUEST: Hold a public hearing and consider a request for a zone change from FD, Future Development District to PD, Planned District for a Recreation Center.

APPLICANT: LCA Engineering

OWNER: Midland Tennis Center, Inc

LEGAL DESCRIPTION: A 27.04-acre tract of land out of Section 24, Block 40, T-1-S, T & P RR Co. Survey, City and County of Midland, Texas.

LOCATION: Generally located on the north side of Briarwood Avenue, approximately 1,300 feet west of Holiday Hill Road.

CURRENT ZONING: FD, Future Development District

DETAILS OF REQUEST:

1. The Henry Foundation owns the property on the north side of Briarwood Avenue, just west of Holiday Hill Road. They are planning to construct an athletic facility which will serve as a hub for local and regional tennis events. This property has recently been annexed into the city limits and requires a zone change at this time.

SURROUNDING ZONING AND LAND USE:

2. The area to the east of Holiday Hill Road is developed primarily with residential uses. The land at the intersection of Holiday Hill Road and Briarwood Avenue is

zoned for retail but remains undeveloped. All land immediately surrounding this property is undeveloped and is zoned FD, Future Development District. There are two permitted, undrilled oil well sites located immediately adjacent to the northwest and northeast of this property. Staff has informed the owner and their representatives of the applicability of Ordinance #8769 (Oil & Gas Well Ordinance, 2009) with this development.

ANALYSIS:

3. This facility falls under the classification of a "community-sponsored recreation center "as listed in the Zoning Code which requires a 1F-1, One Family Dwelling District or less restrictive district. It is planned to be completed in two phases and is planned to consist of 14 practice courts, 45 uncovered full-size courts, 8 covered full-size courts, and 1 central court surrounded by spectator seating. Enclosed structures for classrooms, offices, fitness, limited retail (athletic equipment and apparel), storage, and food vending are also planned. In this case, because of the diversity of the proposed use of this property and surrounding areas, staff recommends the creation of a Planned District.

4. The Site Plan labeled Exhibit A is a Master Plan for the long-term development of this facility which is to be completed as funds are made available through public and private partnerships. At present, funds are available to complete Phase 1 indicated on the Site Plan. Therefore, special consideration must be given by the Planning Staff as to how the sequential development of this property will affect the overall growth of the Briarwood Lane Corridor. Staff has worked extensively with the applicant and their development team to create provisions for a Planned District which is not only compatible with their business plans but that will also compliment the future growth of this corridor.

5. Two key components to the creation of this Planned District include the consideration of the structure labeled in Exhibit A as "Future Dressing/Pro Shop/Offices" and those labeled as "Locker Room Buildings." At present, the Future Dressing/Pro Shop/Offices have not been designed and are planned as part of Phase 2. As this structure will be highly visible from Briarwood Lane, staff recommends that future site plan approval be obtained for the general architecture of this structure once that information is available. Additionally, the applicant plans for the Locker Room Buildings to initially be Industrialized Structures. As the Midland Tennis Center reaches their long term goals, they plan to replace these buildings with permanent structures. As Planned Districts typically adopt permanent buildings solutions for reasons already discussed, staff recommends that these structures be permitted for a limited amount of time.

6. As illustrated in the attached site plan, ingress and egress will occur along Briarwood Avenue. This facility will exceed the City's Landscape Requirements with a variety of landscaping that includes turf grass, trees, xeriscaping, and native vegetation. The building materials indicated in Exhibit A include masonry and masonry wall veneer and comply with the Site Plan Review Standards of the Zoning Code. Sufficient parking will be provided with approximately 350 standard parking spaces, 11 bus parking spaces, and 13 handicapped parking spaces. The facility will be fenced with a chain-link that is standard in tennis facilities. All on-site trash receptacles will be screened with building materials consistent with those used within the facility.

STAFF RECOMMENDATION:

We recommend approval of this request for a zone change from FD, Future Development to PD, Planned District for a Recreation Center, subject to the following conditions:

A. **That this property shall be subject to the regulations of the 1F-1, One Family Dwelling District, except as otherwise stated below.**

B. **This property may be developed with tennis courts and associated facilities.**

C. **That food vending and limited retail may be conducted only as incidental to the recreational use of this property and only within the areas designated by the site plan.**

D. **That the development of the property shall conform to the site plan attached as Exhibit A.**

E. **That the structure labeled in Exhibit A as "Classroom/Fitness" shall be completed within a year of the issuance of a building permit for its construction.**

F. **That the placement of the Industrialized Structures labeled in Exhibit A as "Locker Room Buildings" shall be removed within 72 months of the issuance of a building permit for the construction of the building labeled in Exhibit A as "Classroom/Fitness".**

G. **That the development of the structure labeled in Exhibit A as "Future Dressing/Pro Shop/Offices" shall be subject to future site plan review.**

H. All business signs shall conform to the requirements of the Sign Code.

I. This property must be platted before a building permit is issued.

Cameron Walker, AICP
Planning Division Manager
Department of Development Services

Brandon Melland, Planner
Department of Development Services

Attachments:

Application
Maps
Site Plan

Case Number: Z-10-018

CITY OF MIDLAND
Planning Division

APPLICATION TO CHANGE ZONING CLASSIFICATION

LCA — Applicant Name
432-332-5058 — Contact #'s

521 N. Texas — Address
Odessa, Texas 79761 — Zip Code

Midland Tennis Center INC — Property Owner Name
Contact #'s

3525 Andrews Highway, Midland, Texas 79703 — Address
Zip Code

LCA — Representative Name
432-332-5058 — Contact #'s

521 N. Texas — Address
Odessa, Texas 79761 — Zip Code

Street address and Legal Description of property (complete Lot, Block, and Subdivision Name description below, or, if not in a recorded plat, attach a Metes and Bounds Description. Describe by tracts if more than one zoning district is requested): Being 27.04 acre tract of land located in section 24, Block 40, T-1-S, T&P Railroad Company Survey Midland County, Texas

Reason for requesting a zone change: For use as a tennis facility

PRESENT ZONE: FD

REQUESTED ZONE: PD - RC
(List by tracts if more than one zoning district is requested)

Present Use of Property: Pasture

Proposed Use of Property: Recreational

How will zone change affect the public health, safety and welfare? Will provide better use of property

Describe how conditions affecting the property have changed since it was designated its present zone: Residential Expansion, Annexation into the City

Will a Specific Use Permit with Term for alcoholic beverages sales be needed: ____ Yes __x__ No

APPLICATION FEES:

- Single, standard zone change: **$400.** Multiple, standard zone change: add **$100** per district.
- Single PD, Planned District zone change: **$550.** Multiple PD proposal: add **$100** per district.

80% of fee will be refunded if no P&Z public hearing is called; if no City Council public hearing is called, then 30% of fee will be refunded.

- If a Traffic Impact Analysis is required, a fee of up to $500.00 **will** be assessed.

SITE PLAN SUBMITTALS (if applicable):
16 copies of the PD site plan: ____x___
Site plan on CD in .pdf and .jpg format: ____x____

SIGNATURE (by property owner only - authorized agent must sign affidavit below)

Property Owner (signature): _____Date: _____

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

State of Texas §
County of Midland §

Before me, the undersigned authority, on this day personally appeared Joe M. Tucker, P.E. who, being by me duly sworn, upon oath says: That (S)he is authorized by Grassland Estates West Development Company, LLC, the owner of the above described property, to fully represent him/her in this application and that (S)he has the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Joe M. Tucker, P.E.

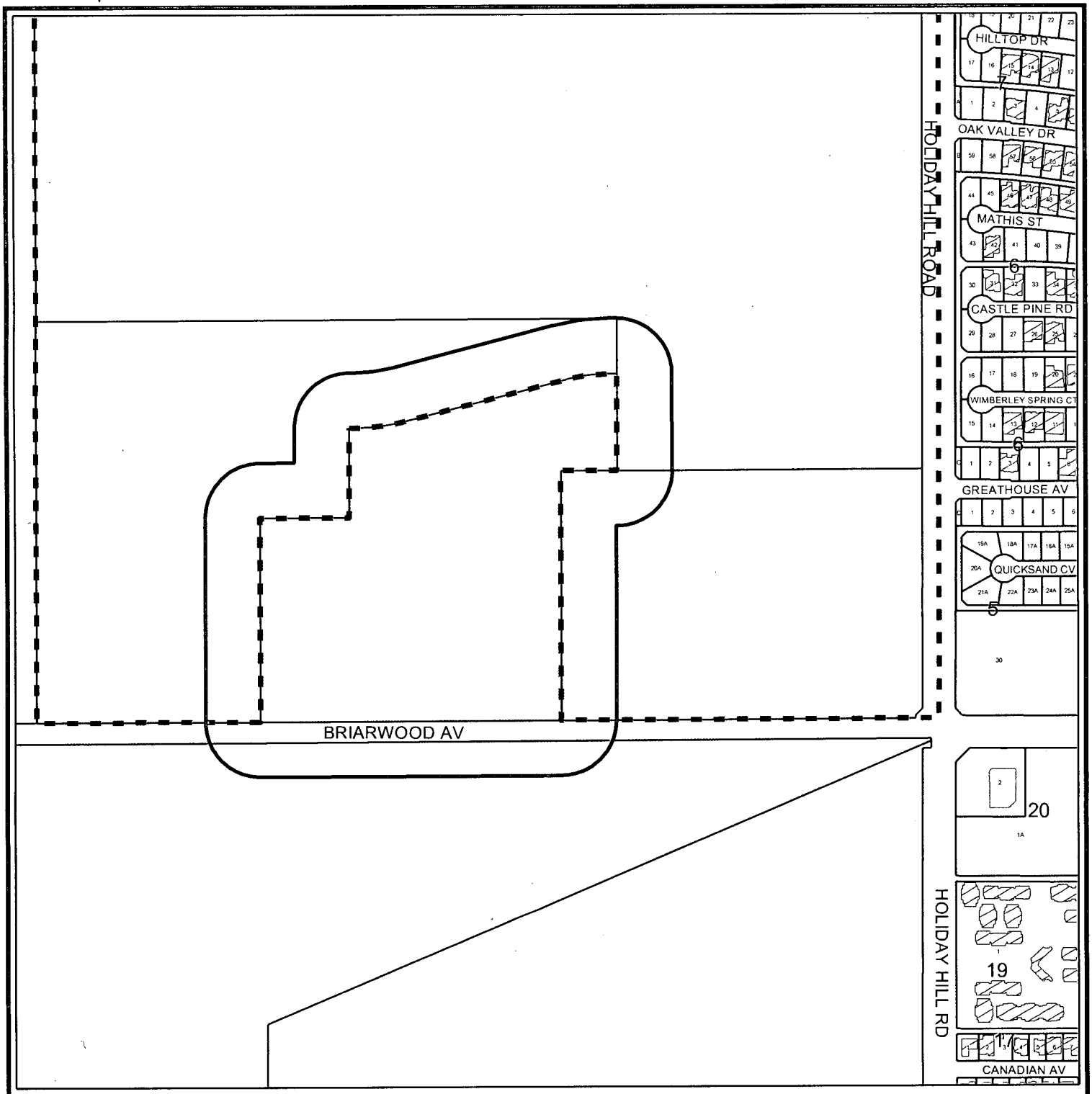
Subscribed and sworn to before me, by the said Joe M. Tucker, P.E., this 19 day of August, 2010, to certify which witness my hand and seal of office.

Notary Public, Ector County, Texas

Shani Dawson
My Commission Expires
03/09/2013

FOR OFFICE USE ONLY
Rec'd By: BCH Date: 08/21/10
Assigned: BCH
For: P&Z On: 09/20/10

****Application will not be considered for scheduling until reviewed by a planner.****



PROPERTY OWNER NOTIFICATION MAP

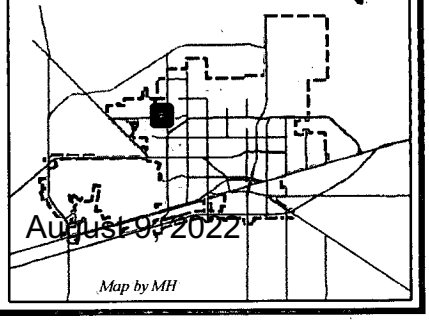
Z - 10 - 018 **Scale: 1" = 500'**

Consider a request for a zone change from FD, Future Development District, to PD, Planned District for a Recreation Center on a 27.04-acre tract of land out of Section 24, Block 40, T-1-S, T & P RR Co. Survey, Midland County, Texas.

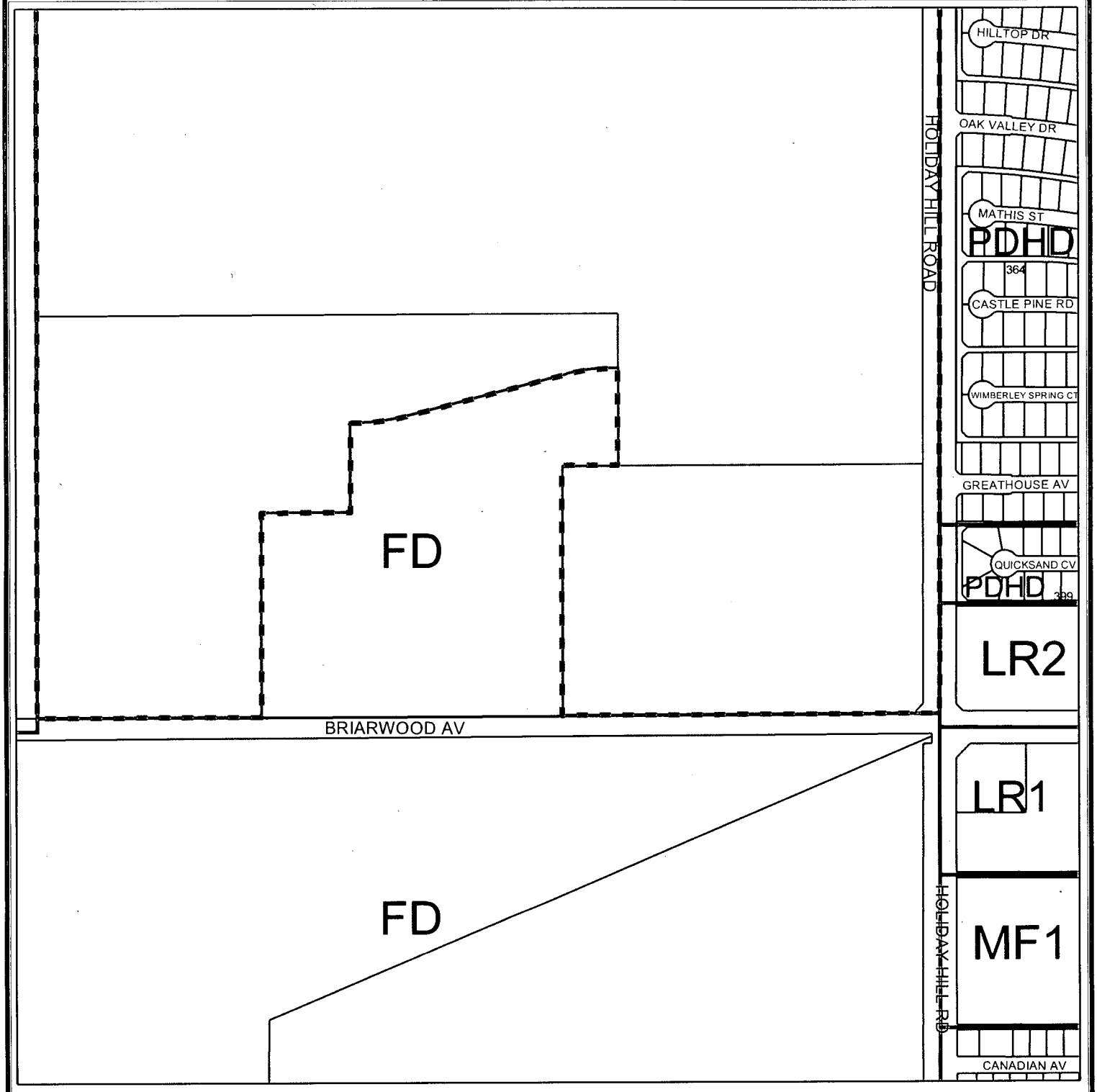
LEGEND

- CITY LIMITS
- 200 FT. LEGAL NOTICE LIMIT
- CITY PARCEL
- COUNTY PARCEL
- PUBLIC BLDGS
- PRIVATE BLDGS
- ACCESSORY BLDGS

City of Midland, Texas
Planning Division



Map by MH



ZONING MAP

Z - 10 - 018 **Scale: 1" = 400'**

Consider a request for a zone change from FD, Future Development District, to PD, Planned District for a Recreation Center on a 27.04-acre tract of land out of Section 24, Block 40, T-1-S, T & P RR Co. Survey, Midland County, Texas.

LEGEND

ZONING — CITY PARCELS

CITY LIMITS — COUNTY PARCELS

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	LR1, LR2 ,LR3	LOCAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP, MP, HP	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

City Council Meeting

Item Number: 17

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: **The proposed granting of an oil and gas well permit to Pioneer Natural Resources, USA, Inc. ("Operator") for the drilling of the oil and gas well Stimson E17A 101H; said well being generally located 405 feet south of Arapahoe Road and 1,362 feet west of Elkins Road (District 1) (Development Services)**

Purpose:

The proposed granting of an oil and gas well permit to Pioneer Natural Resources, USA, Inc. ("Operator") for the drilling of the oil and gas well Stimson E17A 101H; said well being generally located 405 feet south of Arapahoe Road and 1,362 feet west of Elkins Road. Council may consider these permits following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibits. A 24 ft. sound wall will be used during drilling and fracturing operations being located on the west and south side of location. Closest homes approximately 880 feet to the north east of the drill pad site. Pad site is planned to be a 20 well pad site. No quiet frac system being used. Tank Battery will be in the County to the east of Elkins Road. The operator has a surface agreement. Receiving support of the Oil & Gas Advisory Committee, Pioneer Natural Resources is requesting the following variances:

(1) Pioneer Natural Resources requests to allow for twenty-four-hour fracing operations.
(2) Pioneer Natural Resources requests variance to close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
(3) Pioneer Natural Resources requests a variance to remove drill cuttings from surface location to be taken off site.
(4) Pioneer Natural Resources requests variance for irrigation and landscaping of the pad. Proposed fencing provides adequate screening around the pad.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris William Jr.

City Manager's Office

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
04/27/2022	Pioneer Natural Resources, USA, Inc.	777 Hidden Ridge Lane Irving, Texas 75038

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Laura Wallace, Sr Staff Regulatory Specialist
972-969-1742 Office or 817-682-3483 Mobile

Option A:

24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** Attached as Exhibit A

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Pioneer Remote Operations Hub
3617 N Big Spring St. Midland, Texas 79705
432-571-2666 (Available 24/7)

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** Attached as Exhibit B

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1. See Attached Exhibit C
2.
3.

ATTACHED AS EXHIBIT C **is (a** ***Title Opinion by*** Various - See Exhibits ***, a licensed Texas Attorney/Title Commitment by Abstract Company/a Take-off from , a Certified Petroleum Landman/an opinion letter from ,*** ***a licensed Texas Attorney)*** **indicating that [Operator] has a legal right to develop the mineral estate that is the subject of this Application. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):

Located in Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

Surface is owned by Pioneer Natural Resources. There are seven additional owners of property within 860' of proposed Surface Hole Locations. See attached Exhibit C for details.

Property is currently undeveloped. Tank battery will be located outside the city limits.

ATTACHED AS EXHIBIT D **is a Current Tax Roll from Martin & Midland Central Appraisal District.**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Stimson E17A 101H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

Legal Description of Proposed Well Site: Surface Hole Location:

405' FNL, 1362' FEL, Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M* is the Road Repair Agreement and *Letter of Credit/Certificate of Deposit/Surety Bond* in the amount of at least $25,000. *Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):* Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000 *letter of credit/certificate of deposit/surety bond* in conjunction with this request. [See § J(31)].**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: N/A

(2) Operations: Electric is required to support production operations for this well.

Description of water source to be used during Drilling:

Water for drilling will be pulled from an existing fresh water pond located 3750' southeast of the pad. See Exhibit N.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

The route for electric lines can be found on Exhibit N

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]:

A freshwater pit is proposed. See Exhibit O and V for details on closing. Variance on timing is requested.

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* are Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan approved by the City Engineer relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

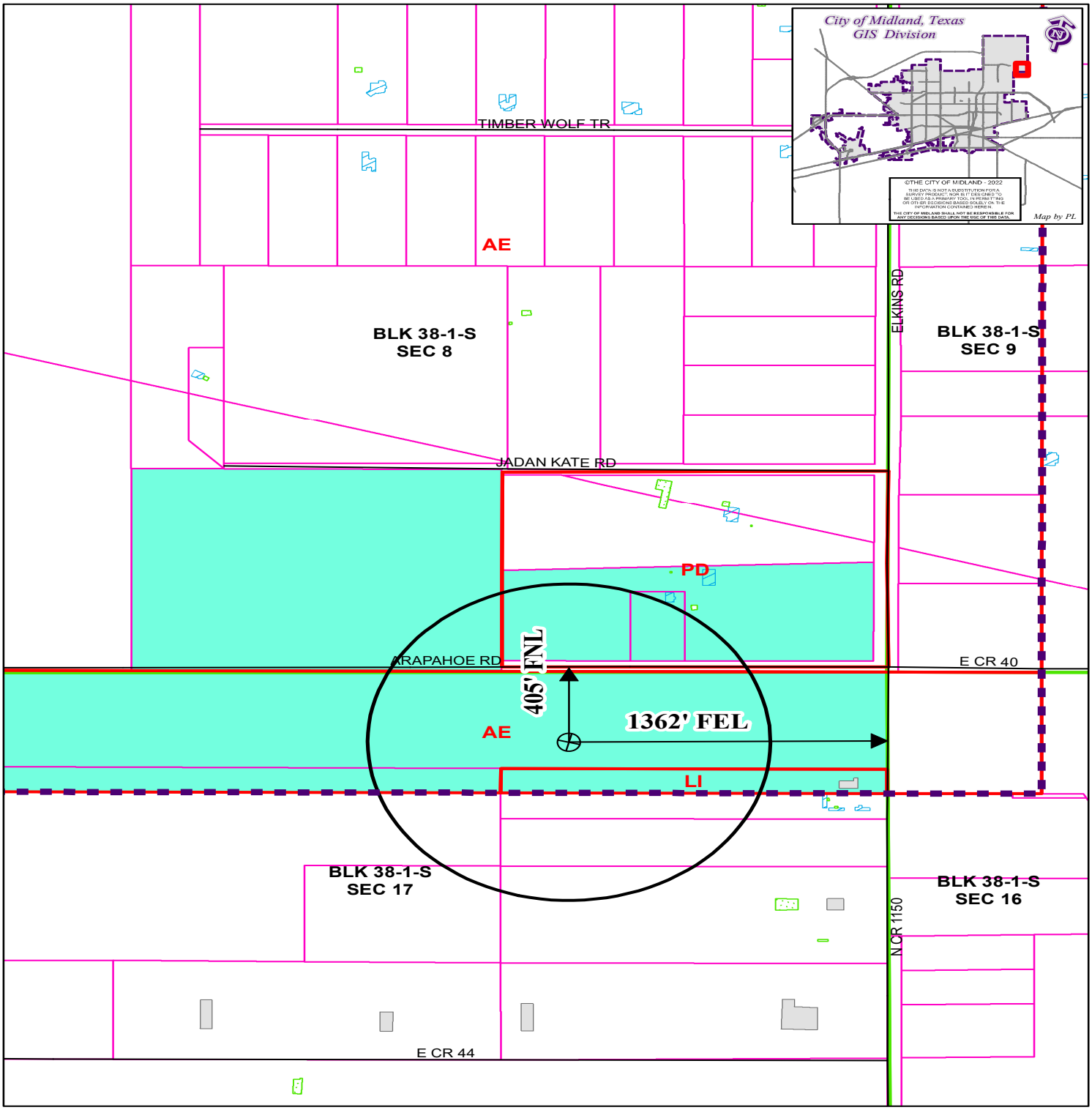
State of Texas)

County of DALLAS)

, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

HEATHER M BARCIA
NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-043967-2022 **Scale: 1" = 600'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 405' FNL and 1362' FEL, Section 17, Block 38-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 405 feet south of Arapahoe Road and 1,362 feet west of Elkins Road.

Stimson E17A 101H

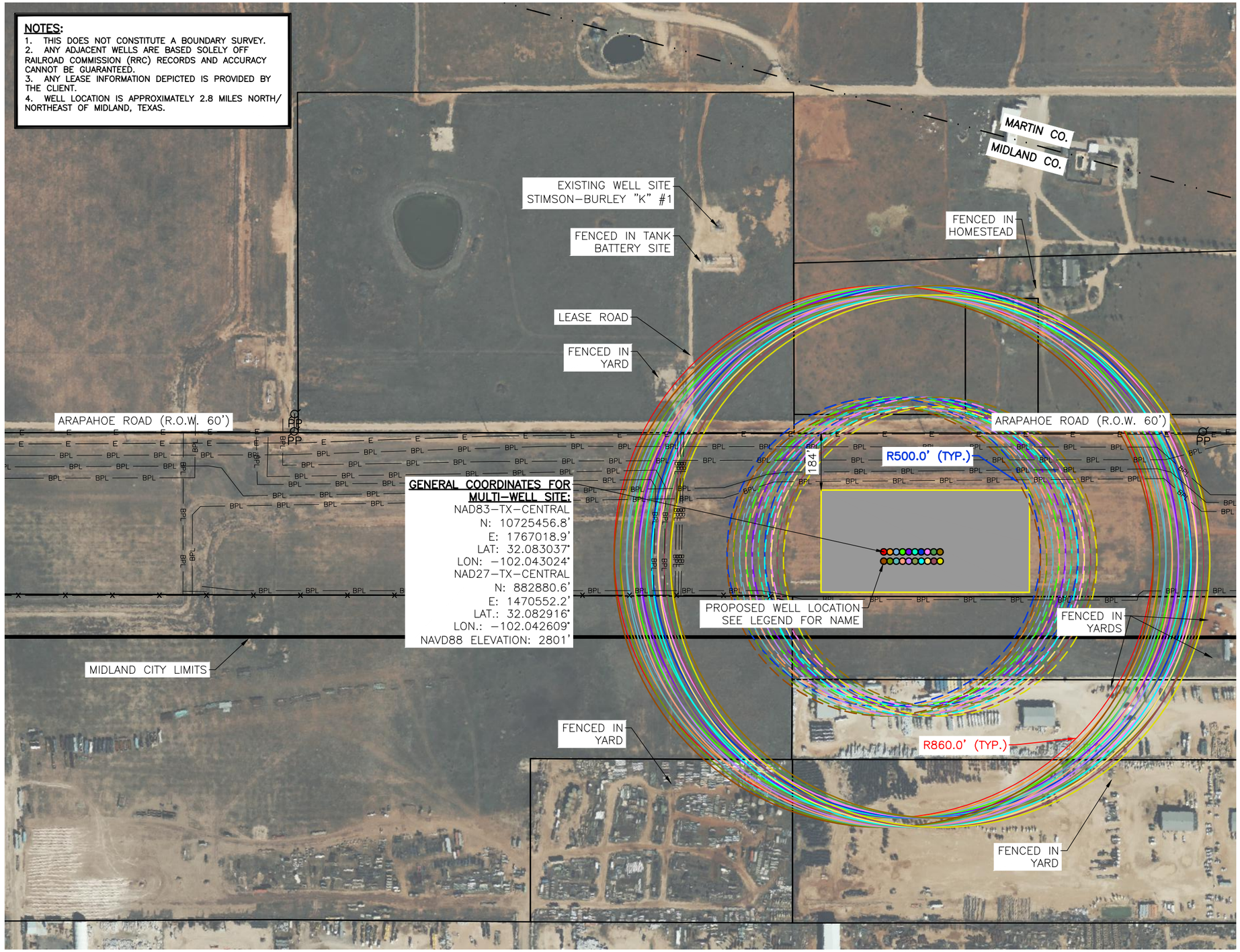
LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR, C1, C2, C3	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

NOTES:
1. THIS DOES NOT CONSTITUTE A BOUNDARY SURVEY.
2. ANY ADJACENT WELLS ARE BASED SOLELY OFF RAILROAD COMMISSION (RRC) RECORDS AND ACCURACY CANNOT BE GUARANTEED.
3. ANY LEASE INFORMATION DEPICTED IS PROVIDED BY THE CLIENT.
4. WELL LOCATION IS APPROXIMATELY 2.8 MILES NORTH/ NORTHEAST OF MIDLAND, TEXAS.



LEGEND

	STIMSON E17A #101H
	STIMSON E17B #102H
	STIMSON E17C #103H
	STIMSON E17D #104H
	STIMSON E17E #105H
	STIMSON E17F #106H
	STIMSON E17G #107H
	STIMSON E17H #108H
	STIMSON E17I #109H
	STIMSON E17J #110H
	STIMSON E17K #111H
	STIMSON E17L #112H
	STIMSON E17M #113H
	STIMSON E17N #114H
	STIMSON E17O #115H
	STIMSON E17P #116H
	STIMSON E17Q #117H
	STIMSON E17R #118H
	STIMSON E17S #119H
	STIMSON E17T #120H
MULTI–COLOR	860–FOOT BUFFER/HALO
MULTI–COLOR	500–FOOT BUFFER/HALO
	PROPOSED WELL PAD SITE
	PROPERTY OWNERSHIP BOUNDARY
	COUNTY LINE
	CITY LIMITS
BPL	BURIED PIPELINE
E	OVERHEAD ELCTRIC
X	FENCE

N

0' 300' 600'

SCALE: 1" = 300'

HALFF®
3300 NORTH A STREET, BUILDING 2, SUITE 120
MIDLAND, TX 79705-5471
TEL (432) 253-3255
TBPELS SURVEYING FIRM #10193998

DATE: 10/20/2021
REV.: 05/16/2022
BY: J. ALVAREZ
AVO: 39678.704

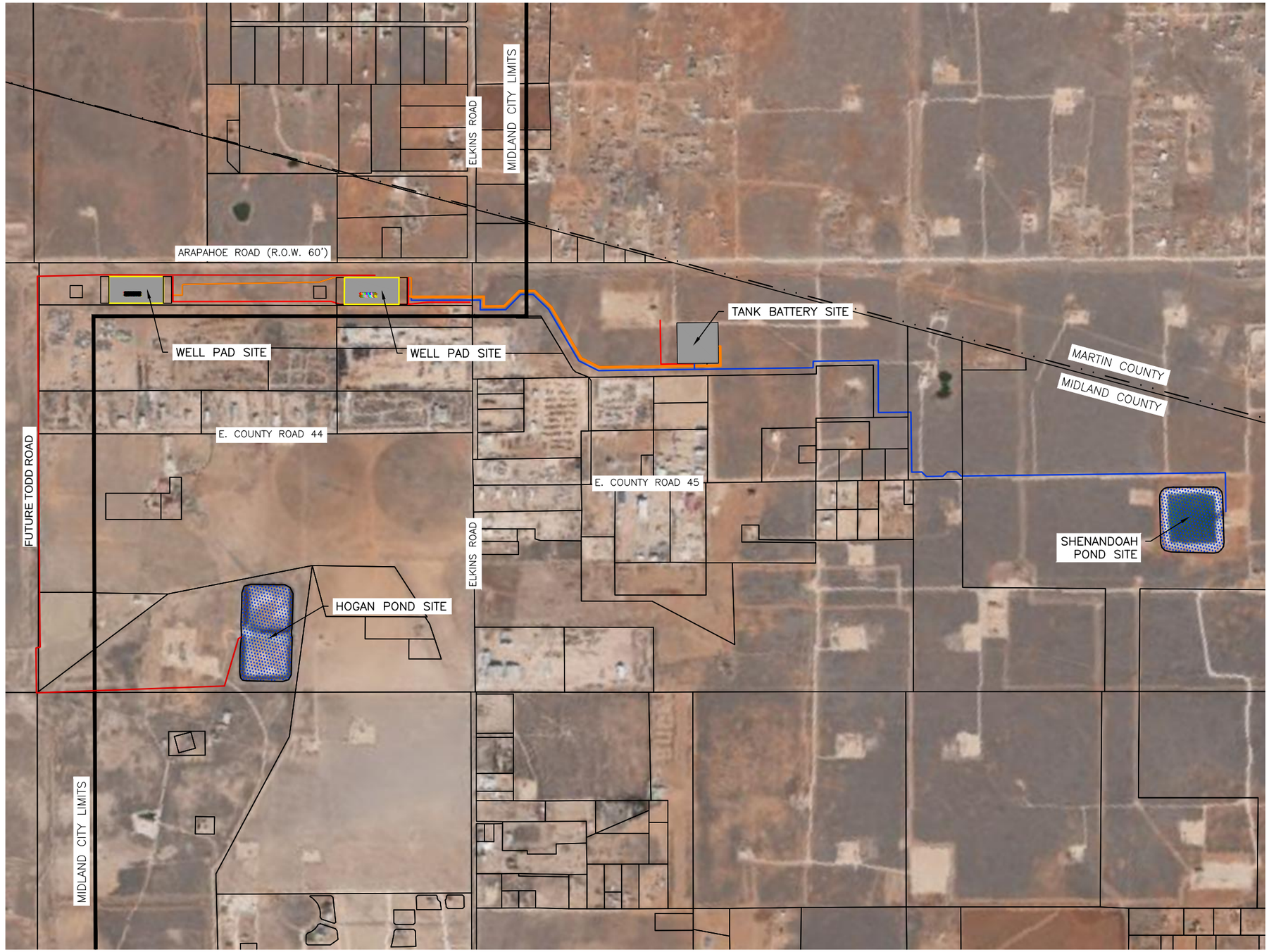
PIONEER NATURAL RESOURCES USA, INC.

EXHIBIT "E"
AERIAL SITE PLAN

STIMSON E17A–E17T
#101H–#120H

LOCATED IN
SECTION 17, BLOCK 38,
TOWNSHIP–1–SOUTH,
T. & P. R.R. CO. SURVEY,
ABSTRACT NO. 152,
MIDLAND COUNTY, TEXAS

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N

0' 1200' 2400'

SCALE: 1" = 1200'

NOTES:

1. THIS DOES NOT CONSTITUTE A BOUNDARY SURVEY.
2. ANY ADJACENT WELLS ARE BASED SOLELY OFF RAILROAD COMMISSION (RRC) RECORDS AND ACCURACY CANNOT BE GUARANTEED.
3. ANY LEASE INFORMATION DEPICTED IS PROVIDED BY THE CLIENT.
4. WELL LOCATION IS APPROXIMATELY 2.0 MILES NORTH/ NORTHEAST OF MIDLAND, TEXAS.

LEGEND

- WELL SURFACE LOCATION
- PROPOSED WELL PAD SITE
- TANK BATTERY SITE
- POND SITE
- PROPOSED FLOWLINE
- PROPOSED PRODUCED WATERLINE
- PROPOSED TEMPORARY WATERLINE
- PROPOSED ELECTRICAL
- E — E — EXISTING OVERHEAD ELECTRICAL
- UG — UG — EXISTING BURIED PIPELINE

HALFF®
3300 NORTH A STREET, BUILDING 2, SUITE 120
MIDLAND, TX 79705-5471
TEL (432) 253-3255
TBPELS SURVEYING FIRM #10193998

DATE: 4/27/2022
REV.: 05/16/2022 J. ALVAREZ
BY: J. GONZALEZ
AVO: 39678.698

PIONEER NATURAL RESOURCES USA, INC.

EXHIBIT "N"
DRILL SITE, GATHERING LINES, ELECTRICAL

STIMSON 17 PADS

LOCATED IN
SECTION 17, BLOCK 38,
TOWNSHIP-1-SOUTH,
T. & P. R.R. CO. SURVEY,
ABSTRACT NO. 152,
MIDLAND COUNTY, TEXAS

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City Council Meeting

Item Number: 18

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: **The proposed granting of oil and gas well permits to Pioneer Natural Resources, USA, Inc. ("Operator") for the drilling of the following oil and gas wells: Stimson-Nail W17K 11H; Stimson-Nail W17L 12H; Stimson-Nail W17M 13H; Stimson-Nail W17N 14H; Stimson-Nail W17O 15H; Stimson-Nail W17P 16H; Stimson-Nail W17Q 17H; Stimson-Nail W17R 18H; Stimson-Nail W17S 19H; and Stimson-Nail W17T 20H; said wells being generally located 405 feet south of Arapahoe Road and between 1,040 and 1,220 feet east of Todd Drive extension (District 1) (Development Services)**

Purpose:

The proposed granting of oil and gas well permits to Pioneer Natural Resources, USA, Inc. ("Operator") for the drilling of the following oil and gas wells: Stimson-Nail W17K 11H; Stimson-Nail W17L 12H; Stimson-Nail W17M 13H; Stimson-Nail W17N 14H; Stimson-Nail W17O 15H; Stimson-Nail W17P 16H; Stimson-Nail W17Q 17H; Stimson-Nail W17R 18H; Stimson-Nail W17S 19H; and Stimson-Nail W17T 20H; said wells being generally located 405 feet south of Arapahoe Road and between 1,040 and 1,220 feet east of Todd Drive extension. Council may consider these permits following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibits. A 24 ft. sound wall will be used during drilling and fracturing operations being located on the north, west and south sides of location. Closest upcoming neighborhood approximately 1,550 feet to the north east of the drill pad site. Pad site is planned to be a 20 well pad site. No quiet frac system being used. Tank Battery will be in the County to the east of Elkins Road. The operator has a surface agreement. Receiving support of the Oil & Gas Advisory Committee, Pioneer Natural Resources is requesting the following variances:

(1) Pioneer Natural Resources requests to allow for twenty-four-hour fracing operations.
(2) Pioneer Natural Resources requests variance to close reserve pit 3 months (90 days) after operations are completed on all wells on the pad.
(3) Pioneer Natural Resources requests a variance to remove drill cuttings from surface location to be taken off site.
(4) Pioneer Natural Resources requests variance for irrigation and landscaping of the pad. Proposed fencing provides adequate screening around the pad.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris William Jr.

City Manager's Office

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
04/27/2022	Pioneer Natural Resources, USA, Inc.	777 Hidden Ridge Lane Irving, Texas 75038

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Laura Wallace, Sr Staff Regulatory Specialist
972-969-1742 Office or 817-682-3483 Mobile

Option A:

24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

Option B:

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3617 N Big Spring St. Midland, Texas 79705
432-571-2666 (Available 24/7)

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** Attached as Exhibit B

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1. See Attached Exhibit C
2.
3.

ATTACHED AS EXHIBIT C **is (a** ***Title Opinion by*** Various - See Exhibits ***, a licensed Texas Attorney/Title Commitment by Abstract Company/a Take-off from , a Certified Petroleum Landman/an opinion letter from ,*** ***a licensed Texas Attorney)*** **indicating that [Operator] has a legal right to develop the mineral estate that is the subject of this Application. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):

Located in Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

Surface is owned by Pioneer Natural Resources. There are seven additional owners of property within 860' of proposed Surface Hole Locations. See attached Exhibit C for details.

Property is currently undeveloped. Tank battery will be located outside the city limits.

ATTACHED AS EXHIBIT D **is a Current Tax Roll from Martin & Midland Central Appraisal District.**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

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IV. Well & Operations Information

Proposed Well Name: Stimson-Nail W17K 11H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

Legal Description of Proposed Well Site: Surface Hole Location:

405' FNL, 1040' FWL, Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

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(1) Drilling: N/A

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Description of water source to be used during Drilling:

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The route for electric lines can be found on Exhibit N

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]:

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***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

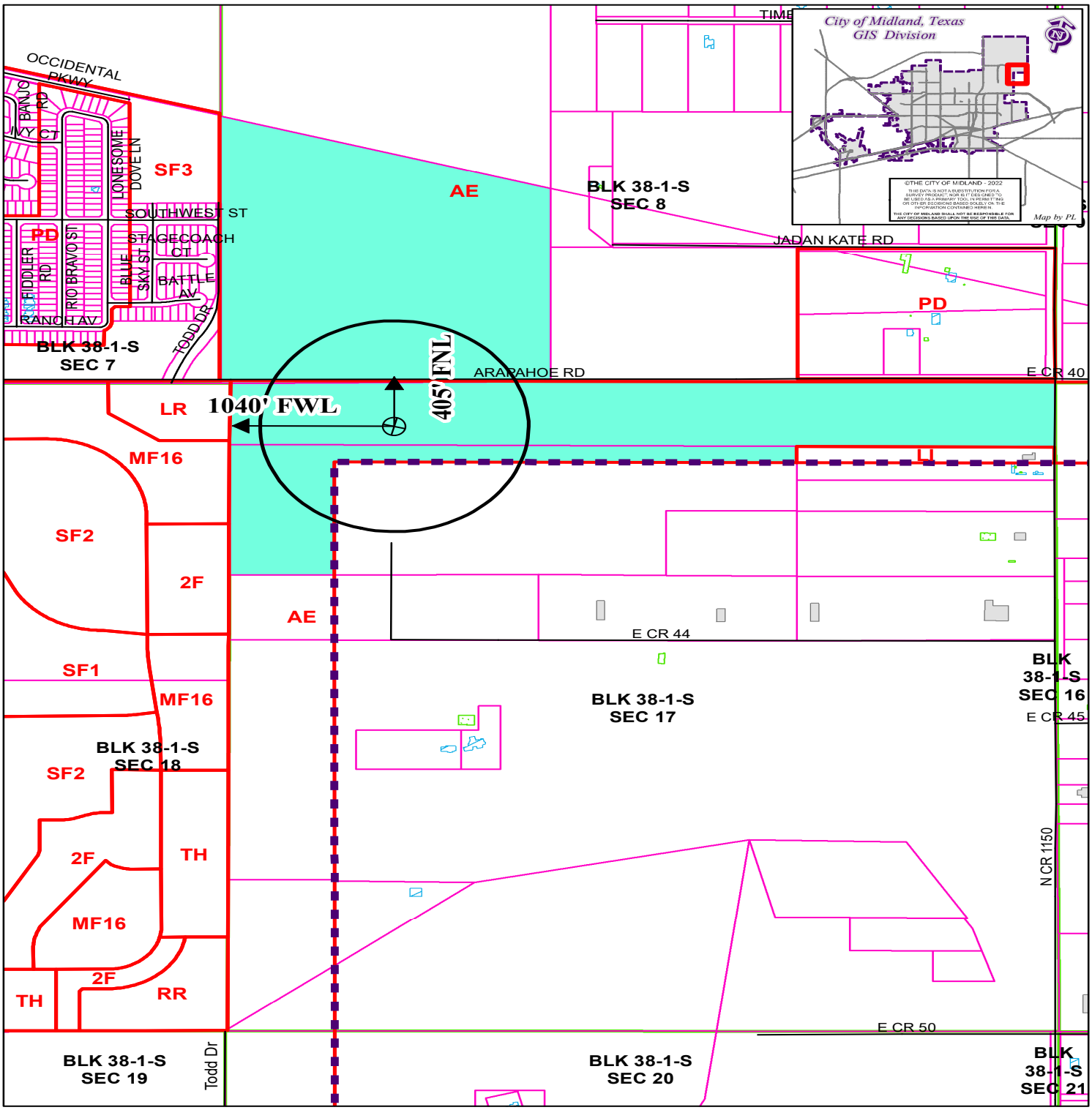
State of Texas)

County of DALLAS)

, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

HEATHER M BARCIA
NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-043984-2022 **Scale: 1" = 900'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 405' FNL and 1040' FWL, Section 17, Block 38-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 405 feet south of Arapahoe Road and 1,040 feet east of Todd Drive extension.

Stimson-Nail W17K 11H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

NOTES:
1. THIS DOES NOT CONSTITUTE A BOUNDARY SURVEY.
2. ANY ADJACENT WELLS ARE BASED SOLELY OFF RAILROAD COMMISSION (RRC) RECORDS AND ACCURACY CANNOT BE GUARANTEED.
3. ANY LEASE INFORMATION DEPICTED IS PROVIDED BY THE CLIENT.
4. WELL LOCATIONS ARE APPROXIMATELY 2.0 MILES NORTH/ NORTHEAST OF MIDLAND, TEXAS.

GENERAL COORDINATES FOR MULTI-WELL SITE:
NAD83-TX-CENTRAL
N: 10724759.7'
E: 1764235.5'
LAT: 32.081003°
LON: -102.051974°
NAD27-TX-CENTRAL
N: 882154.4'
E: 1467776.3'
LAT.: 32.080803°
LON.: -102.051533°
NAVD88 ELEVATION: 2798'

EXISTING WELL SITE
STIMSON-BURLEY "H" #1

LEASE ROAD

FENCED IN YARDS

ARAPAHOE ROAD (R.O.W. 60')

TANK BATTERY SITE

169'

PROPOSED WELL LOCATION SEE LEGEND FOR NAME

MIDLAND CITY LIMITS

R500.0' (TYP.)

R860.0' (TYP.)

MIDLAND CITY LIMITS

LEASE ROAD

FENCED IN YARD

LEGEND

●	STIMSON W17A #1H
●	STIMSON W17B #2H
●	STIMSON W17C #3H
●	STIMSON W17D #4H
●	STIMSON W17E #5H
●	STIMSON W17F #6H
●	STIMSON W17G #7H
●	STIMSON W17H #8H
●	STIMSON W17I #9H
●	STIMSON W17J #10H
●	STIMSON W17K #11H
●	STIMSON W17L #12H
●	STIMSON W17M #13H
●	STIMSON W17N #14H
●	STIMSON W17O #15H
●	STIMSON W17P #16H
●	STIMSON W17Q #17H
●	STIMSON W17R #18H
●	STIMSON W17S #19H
●	STIMSON W17T #20H
MULTI-COLOR	860-FOOT BUFFER/HALO
MULTI-COLOR	500-FOOT BUFFER/HALO
	PROPOSED WELL PAD SITE
	PROPERTY OWNERSHIP BOUNDARY
	CITY LIMITS
BPL	BURIED PIPELINE
E	OVERHEAD ELCTRIC
X	FENCE

N

0' 300' 600'

SCALE: 1" = 300'

HALFF®
3300 NORTH A STREET, BUILDING 2, SUITE 120
MIDLAND, TX 79705-5471
TEL (432) 253-3255
TBPELS SURVEYING FIRM #10193998

DATE: 10/21/2021
REV.: 05/16/2022
BY: J. ALVAREZ
AVO: 39678.698

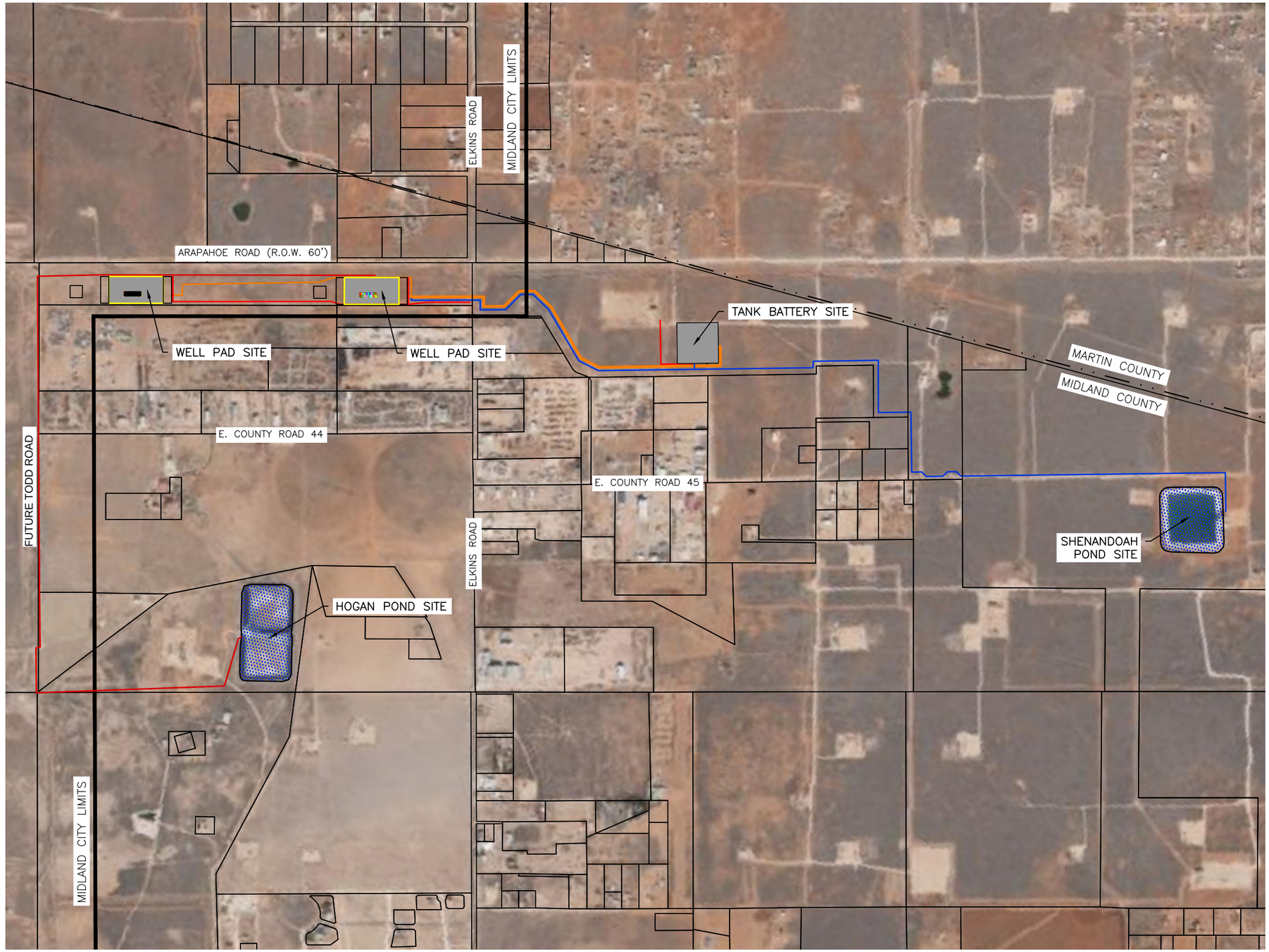
PIONEER NATURAL RESOURCES USA, INC.

EXHIBIT "E"
AERIAL SITE PLAN

STIMSON W17A-W17T #1H-#20H

LOCATED IN
SECTION 17, BLOCK 38,
TOWNSHIP-1-SOUTH,
T. & P. R.R. CO. SURVEY,
ABSTRACT NO. 152,
MIDLAND COUNTY, TEXAS

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N

0' 1200' 2400'

SCALE: 1" = 1200'

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LEGEND

- WELL SURFACE LOCATION
- PROPOSED WELL PAD SITE
- TANK BATTERY SITE
- POND SITE
- PROPOSED FLOWLINE
- PROPOSED PRODUCED WATERLINE
- PROPOSED TEMPORARY WATERLINE
- PROPOSED ELECTRICAL
- E — E — EXISTING OVERHEAD ELECTRICAL
- UG — UG — EXISTING BURIED PIPELINE

HALFF®
3300 NORTH A STREET, BUILDING 2, SUITE 120
MIDLAND, TX 79705-5471
TEL (432) 253-3255
TBPELS SURVEYING FIRM #10193998

DATE: 4/27/2022
REV.: 05/16/2022 J. ALVAREZ
BY: J. GONZALEZ
AVO: 39678.698

PIONEER NATURAL RESOURCES USA, INC.

EXHIBIT "N"
DRILL SITE, GATHERING LINES, ELECTRICAL

STIMSON 17 PADS

LOCATED IN
SECTION 17, BLOCK 38,
TOWNSHIP-1-SOUTH,
T. & P. R.R. CO. SURVEY,
ABSTRACT NO. 152,
MIDLAND COUNTY, TEXAS

I:\39000s\39678\698\CADD\SheetsMLD\EXHIBIT_PLATS\039678.698_EXHIBIT_N_DRILL_SITE.dwg

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
04/27/2022	Pioneer Natural Resources, USA, Inc.	777 Hidden Ridge Lane Irving, Texas 75038

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

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Option A:

24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

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Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** Attached as Exhibit B

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General Description of Current Surface Use (within 860 feet of proposed surface location):

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Surface is owned by Pioneer Natural Resources. There are seven additional owners of property within 860' of proposed Surface Hole Locations. See attached Exhibit C for details.

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IV. Well & Operations Information

Proposed Well Name: Stimson-Nail W17L 12H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

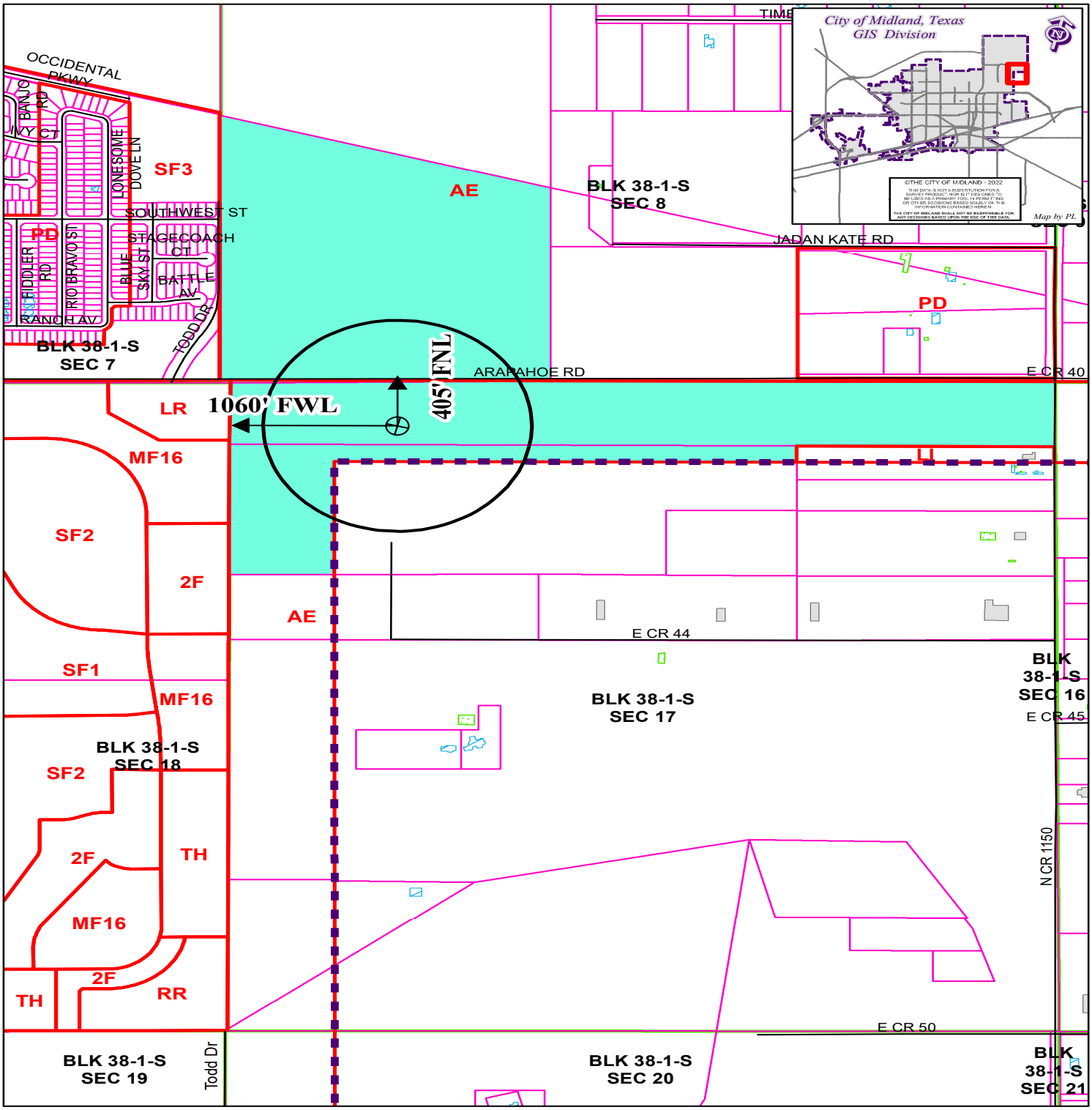
State of Texas)

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, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

HEATHER M BARCIA
NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-043968-2022 **Scale: 1" = 900'**

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Stimson-Nail W17L 12H

LEGEND

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ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

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IV. Well & Operations Information

Proposed Well Name: Stimson-Nail W17M 13H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

Legal Description of Proposed Well Site: Surface Hole Location:

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
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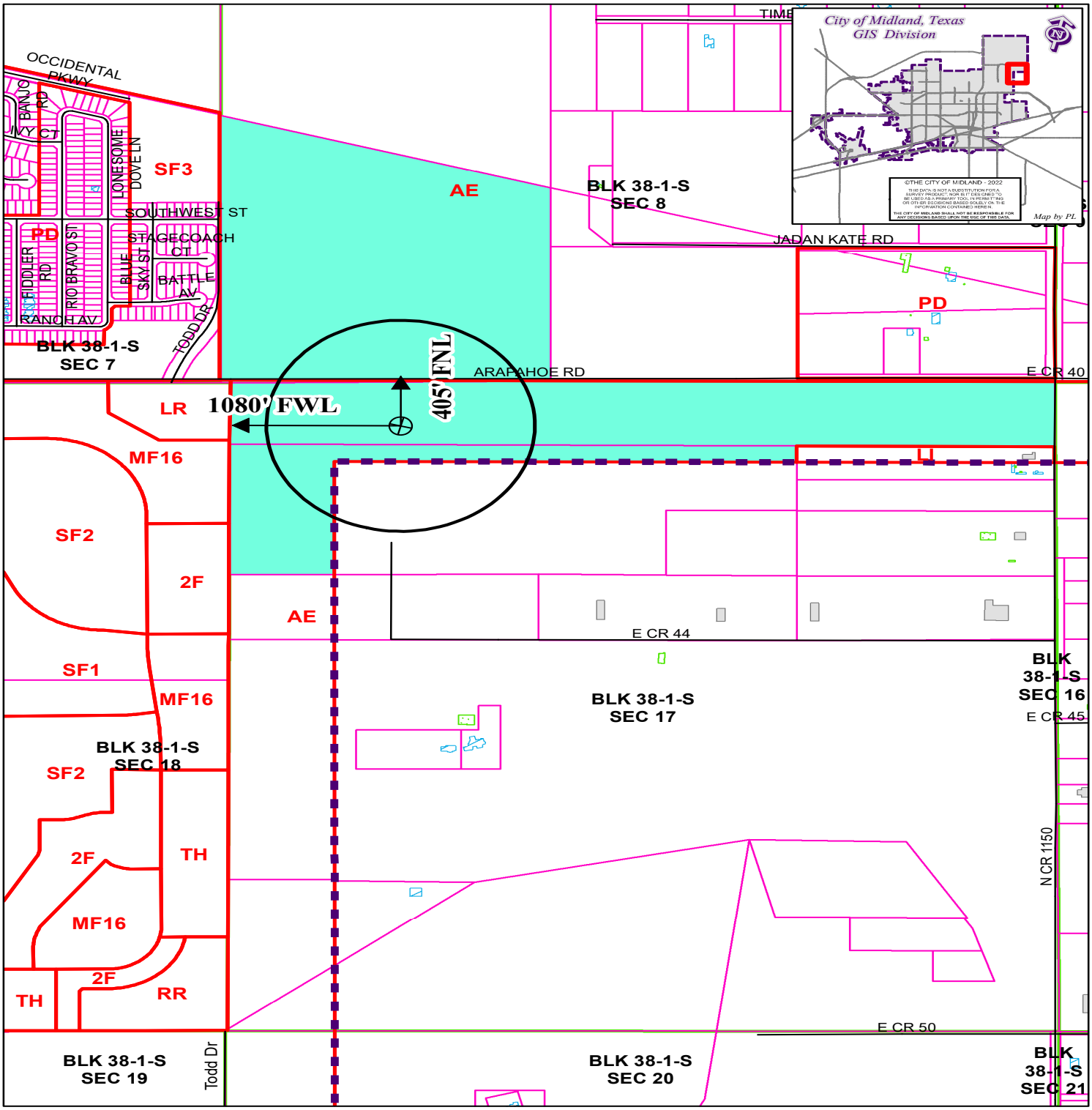
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ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
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Oil-043969-2022 **Scale: 1" = 900'**

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Stimson-Nail W17M 13H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
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ZONING DISTRICTS:

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(Pursuant to Midland City Ordinance No. 8769)

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Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

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972-969-1742 Office or 817-682-3483 Mobile

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24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

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Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

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[NAME OF COMPANY]

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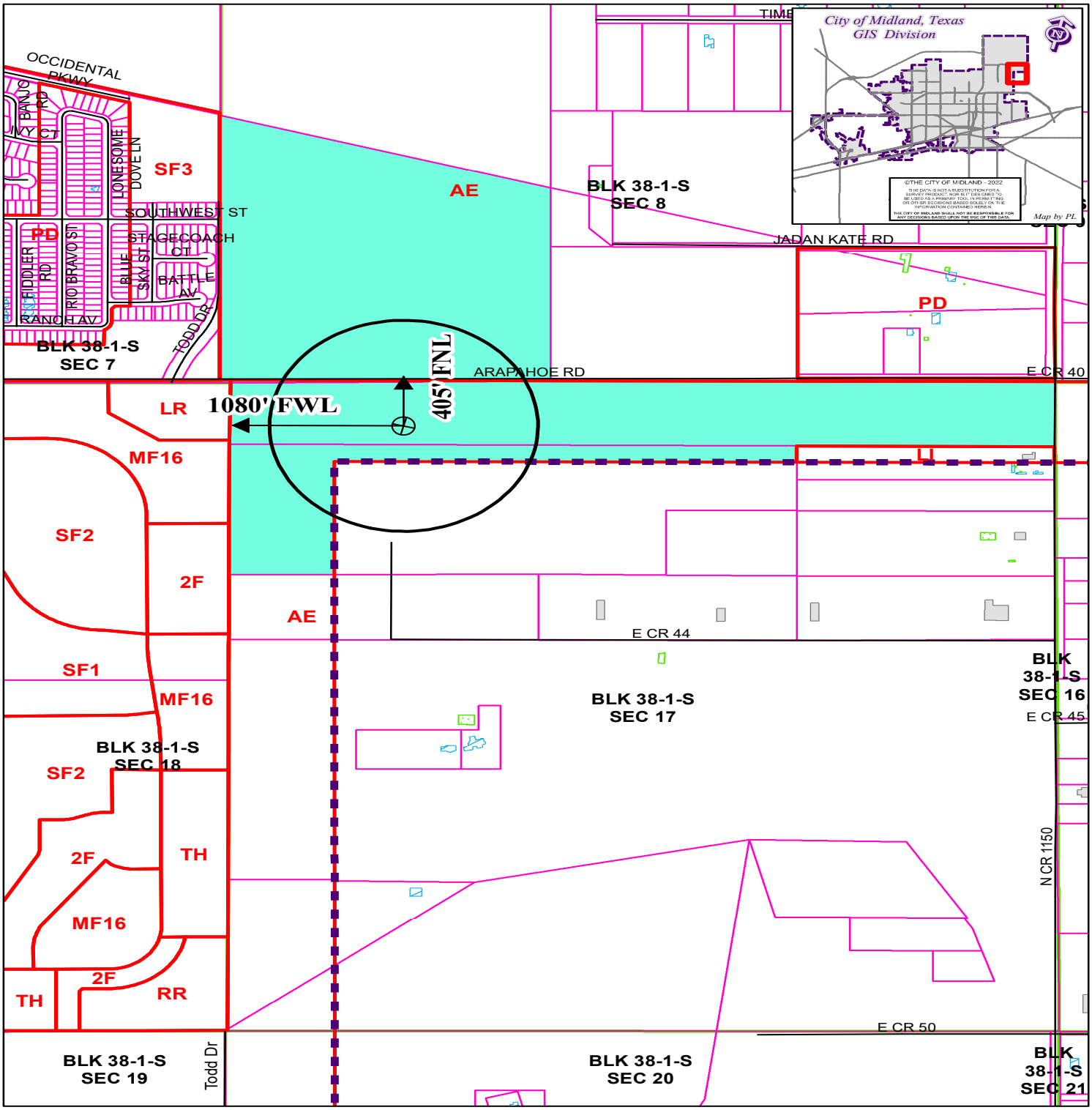
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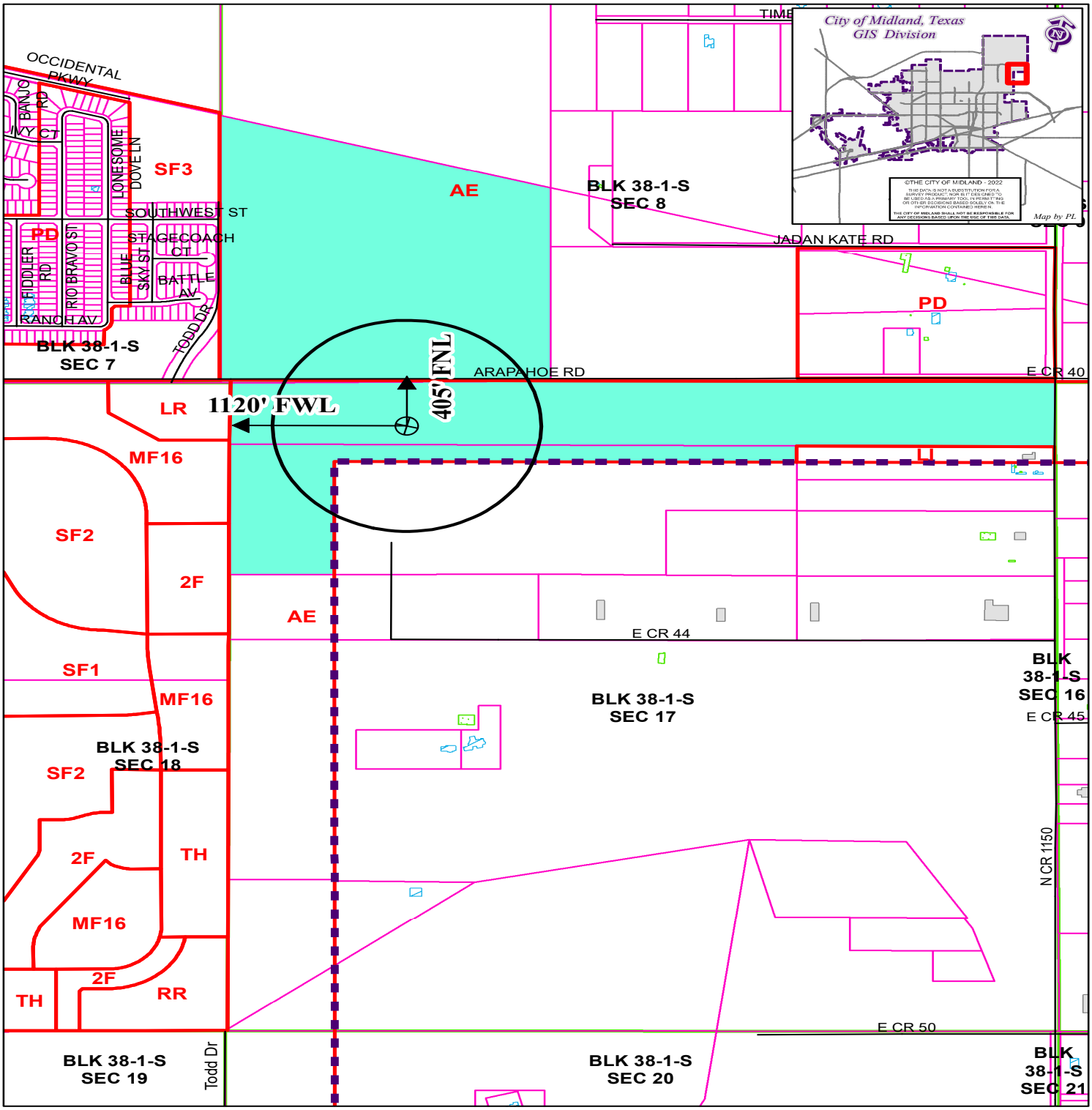
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Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

Legal Description of Proposed Well Site: Surface Hole Location:

405' FNL, 1140' FWL, Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

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The route for electric lines can be found on Exhibit N

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V. Additional Required Exhibits

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

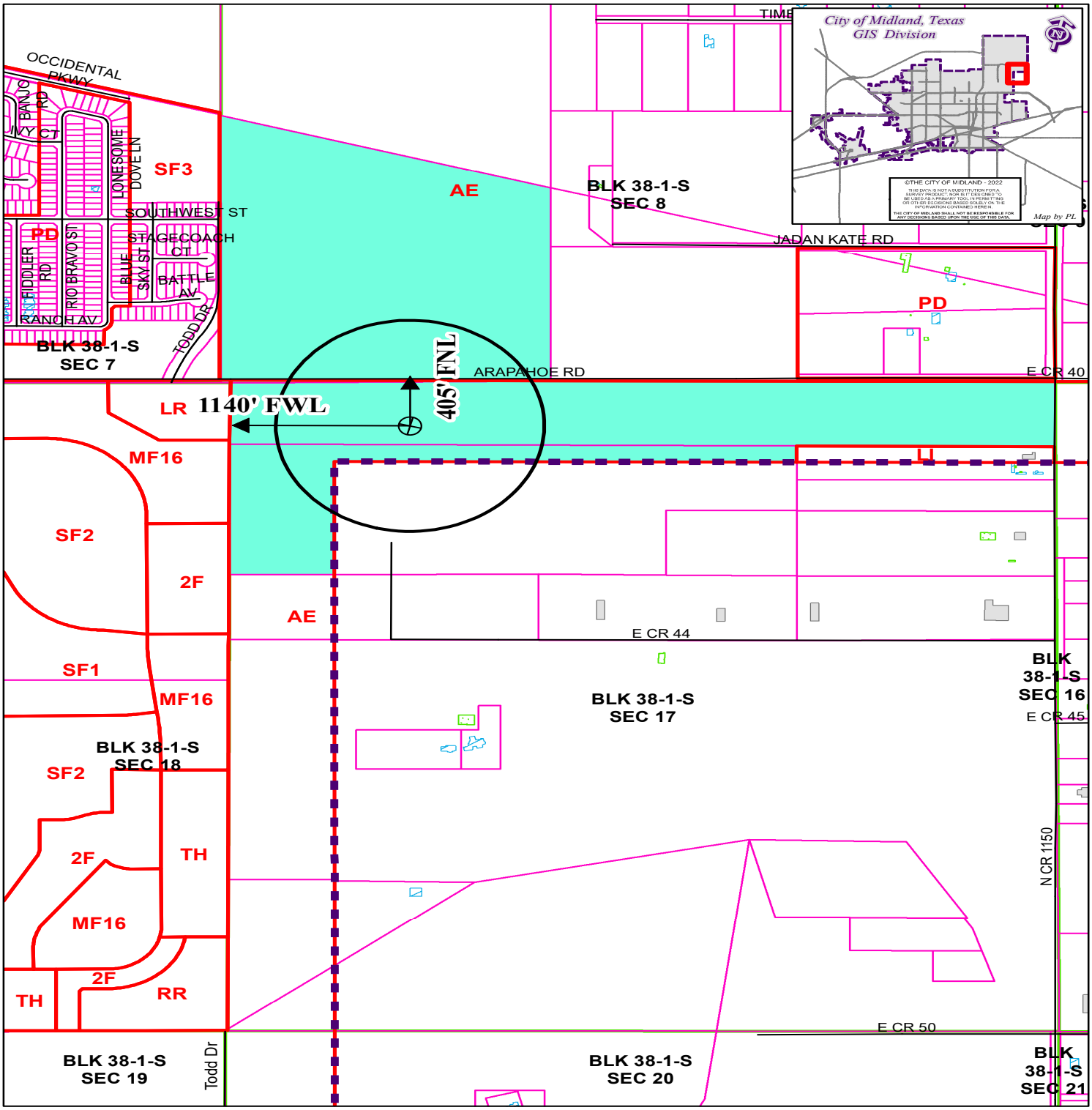
State of Texas)

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, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

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NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-043970-2022 **Scale: 1" = 900'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 405' FNL and 1140' FWL, Section 17, Block 38-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 405 feet south of Arapahoe Road and 1,140 feet east of Todd Drive extension.

Stimson-Nail W17P 16H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
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1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
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APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
04/27/2022	Pioneer Natural Resources, USA, Inc.	777 Hidden Ridge Lane Irving, Texas 75038

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Laura Wallace, Sr Staff Regulatory Specialist
972-969-1742 Office or 817-682-3483 Mobile

Option A:

24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** Attached as Exhibit A

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Pioneer Remote Operations Hub
3617 N Big Spring St. Midland, Texas 79705
432-571-2666 (Available 24/7)

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** Attached as Exhibit B

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1. See Attached Exhibit C
2.
3.

ATTACHED AS EXHIBIT C **is (a** ***Title Opinion by*** Various - See Exhibits ***, a licensed Texas Attorney/Title Commitment by Abstract Company/a Take-off from , a Certified Petroleum Landman/an opinion letter from ,*** ***a licensed Texas Attorney)*** **indicating that [Operator] has a legal right to develop the mineral estate that is the subject of this Application. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):

Located in Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

Surface is owned by Pioneer Natural Resources. There are seven additional owners of property within 860' of proposed Surface Hole Locations. See attached Exhibit C for details.

Property is currently undeveloped. Tank battery will be located outside the city limits.

ATTACHED AS EXHIBIT D **is a Current Tax Roll from Martin & Midland Central Appraisal District.**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

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IV. Well & Operations Information

Proposed Well Name: Stimson-Nail W17Q 17H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

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Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

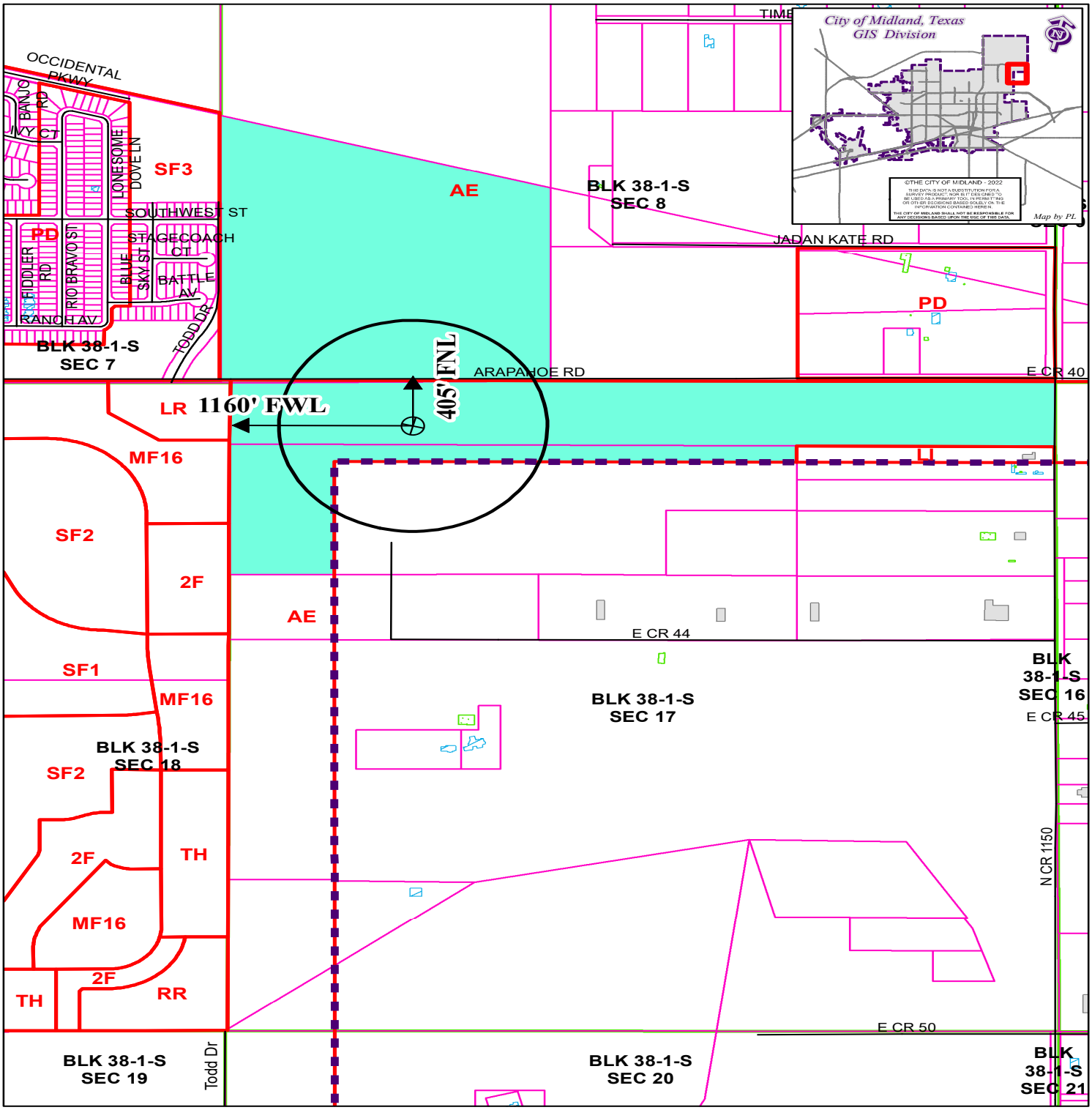
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[SEAL]

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Stimson-Nail W17Q 17H

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[NAME OF COMPANY]

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Its Regulatory Advisor

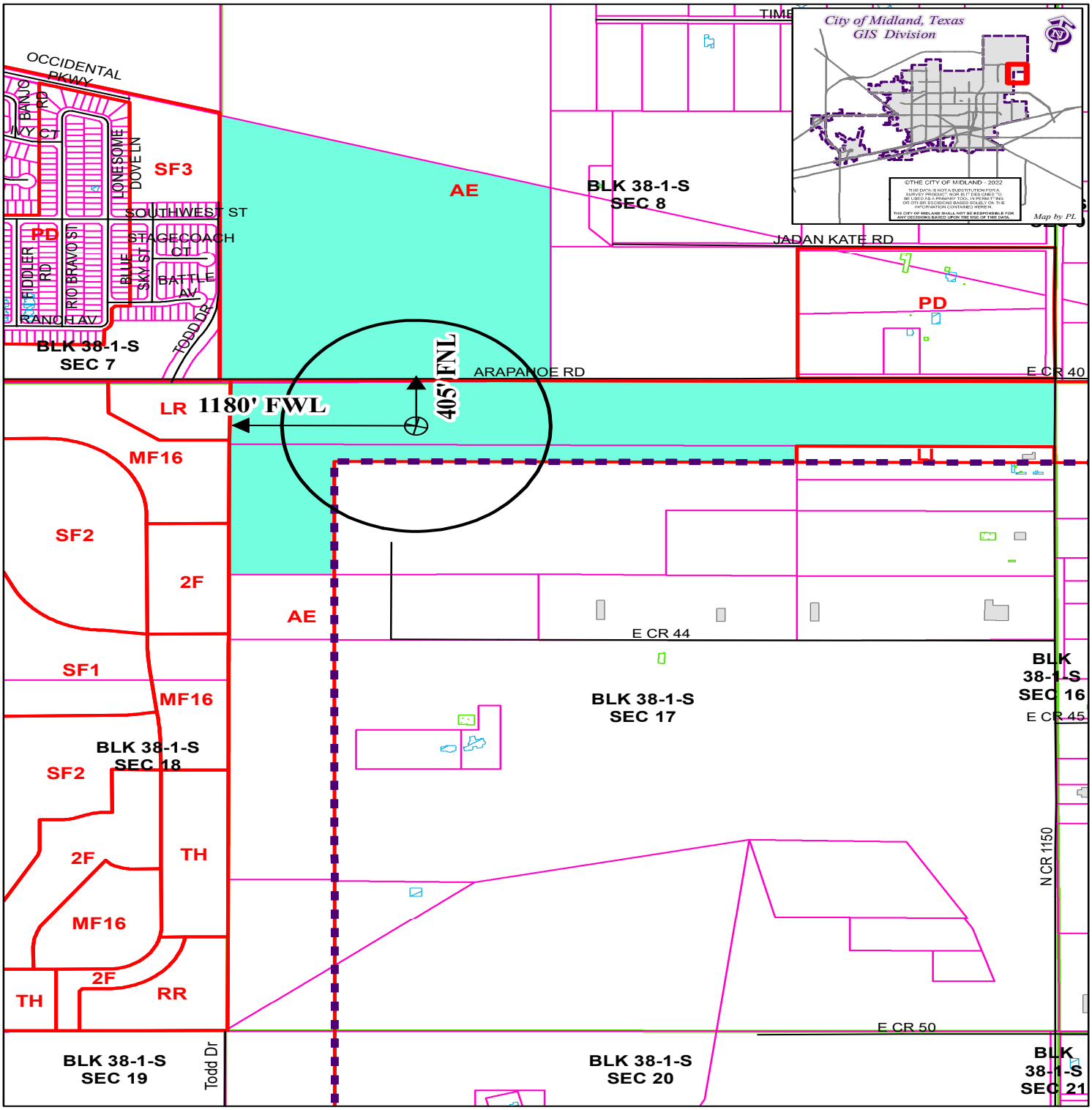
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***ATTACHED AS EXHIBIT M* is the Road Repair Agreement and *Letter of Credit/Certificate of Deposit/Surety Bond* in the amount of at least $25,000. *Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):* Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000 *letter of credit/certificate of deposit/surety bond* in conjunction with this request. [See § J(31)].**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: N/A

(2) Operations: Electric is required to support production operations for this well.

Description of water source to be used during Drilling:

Water for drilling will be pulled from an existing fresh water pond located 3750' southeast of the pad. See Exhibit N.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

The route for electric lines can be found on Exhibit N

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]:

A freshwater pit is proposed. See Exhibit O and V for details on closing. Variance on timing is requested.

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* are Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan approved by the City Engineer relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

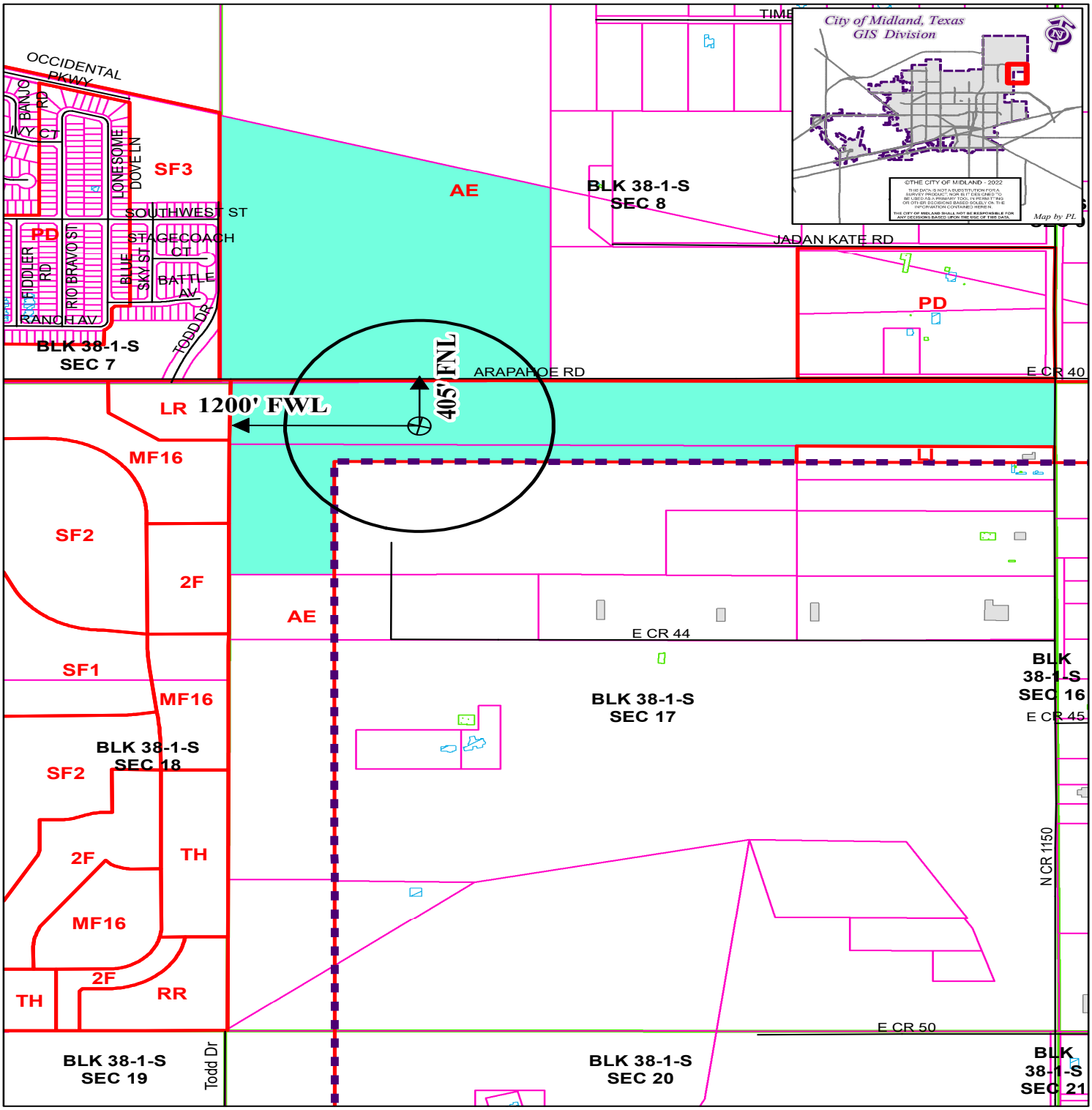
State of Texas)

County of DALLAS)

, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

HEATHER M BARCIA
NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-043979-2022 **Scale: 1" = 900'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 405' FNL and 1200' FWL, Section 17, Block 38-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 405 feet south of Arapahoe Road and 1,200 feet east of Todd Drive extension.

Stimson-Nail W17S 19H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
04/27/2022	Pioneer Natural Resources, USA, Inc.	777 Hidden Ridge Lane Irving, Texas 75038

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Matt Mathis, Field Production Operations Manager	3617 N Big Spring St Midland, Texas 79705	432-571-3086 Office 469-203-5174 Mobile Rep. Fax
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Laura Wallace, Sr Staff Regulatory Specialist
972-969-1742 Office or 817-682-3483 Mobile

Option A:

24/7 Answering Services - No. 1 (Tele.): 432-571-2666 **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** Attached as Exhibit A

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Pioneer Remote Operations Hub
3617 N Big Spring St. Midland, Texas 79705
432-571-2666 (Available 24/7)

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** Attached as Exhibit B

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1. See Attached Exhibit C
2.
3.

ATTACHED AS EXHIBIT C **is (a** ***Title Opinion by*** Various - See Exhibits ***, a licensed Texas Attorney/Title Commitment by Abstract Company/a Take-off from , a Certified Petroleum Landman/an opinion letter from ,*** ***a licensed Texas Attorney)*** **indicating that [Operator] has a legal right to develop the mineral estate that is the subject of this Application. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):

Located in Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

Surface is owned by Pioneer Natural Resources. There are seven additional owners of property within 860' of proposed Surface Hole Locations. See attached Exhibit C for details.

Property is currently undeveloped. Tank battery will be located outside the city limits.

ATTACHED AS EXHIBIT D **is a Current Tax Roll from Martin & Midland Central Appraisal District.**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Stimson-Nail W17T 20H

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

A wellbore schematic with the applicable information is attached within Exhibit G.

Legal Description of Proposed Well Site: Surface Hole Location:

405' FNL, 1220' FWL, Section 17, Block 38, T1S, T&P RR Co., Abstract 152, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

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***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M* is the Road Repair Agreement and *Letter of Credit/Certificate of Deposit/Surety Bond* in the amount of at least $25,000. *Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):* Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000 *letter of credit/certificate of deposit/surety bond* in conjunction with this request. [See § J(31)].**

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Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: N/A

(2) Operations: Electric is required to support production operations for this well.

Description of water source to be used during Drilling:

Water for drilling will be pulled from an existing fresh water pond located 3750' southeast of the pad. See Exhibit N.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

The route for electric lines can be found on Exhibit N

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]:

A freshwater pit is proposed. See Exhibit O and V for details on closing. Variance on timing is requested.

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* are Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan approved by the City Engineer relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

Pioneer Natural Resources
[NAME OF COMPANY]

By Laura E Wallace
Its Regulatory Advisor

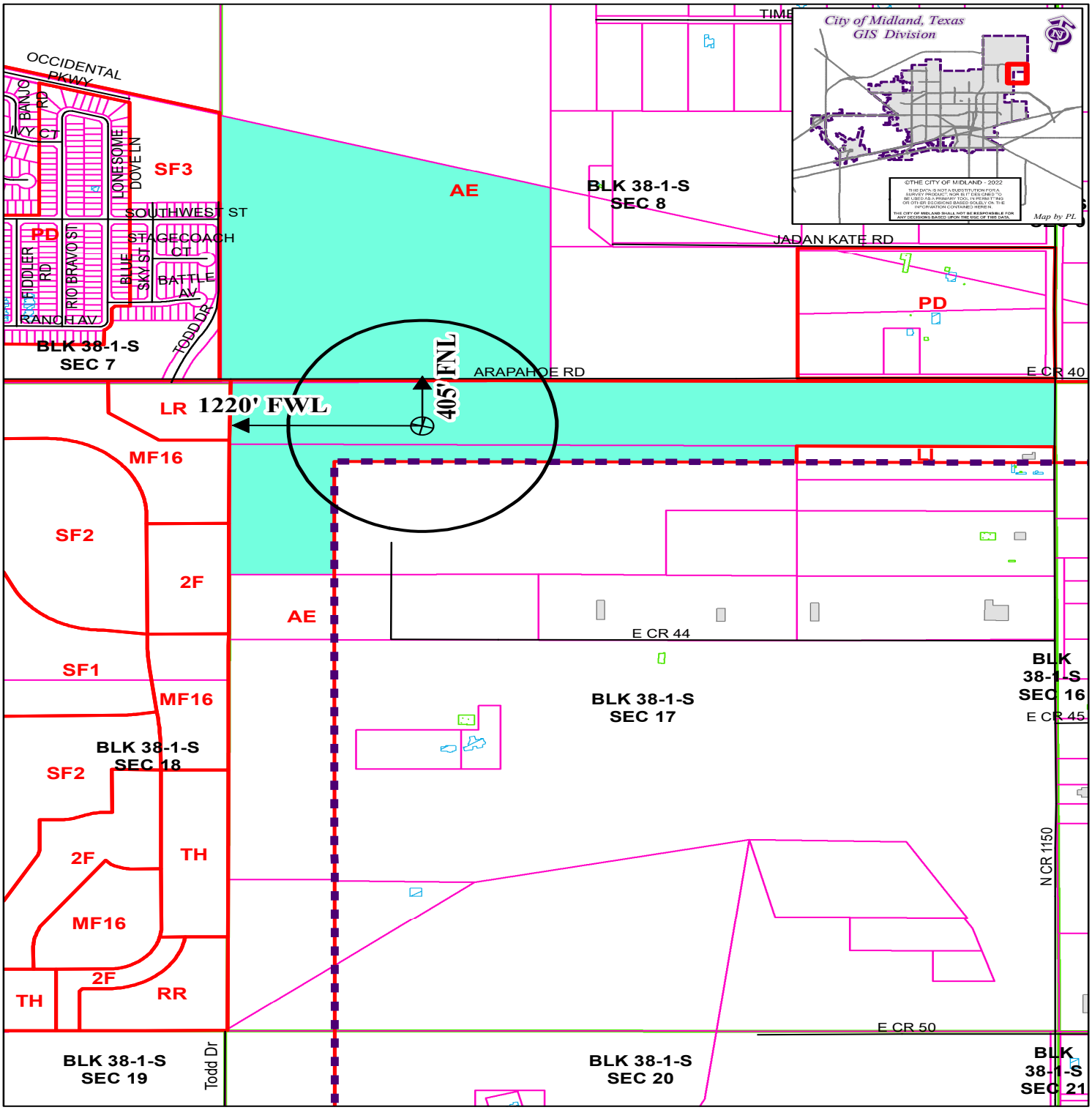
State of Texas)

County of DALLAS)

, personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

HEATHER M BARCIA
NOTARY PUBLIC
ID# 11239288
State of Texas
Comm. Exp. 06-01-2022
[SEAL]

Notary Public, State of 6/01/2022



LOCATION AND ZONING MAP

Oil-043977-2022 **Scale: 1" = 900'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 405' FNL and 1220' FWL, Section 17, Block 38-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 405 feet south of Arapahoe Road and 1,220 feet east of Todd Drive extension.

Stimson-Nail W17T 20H

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
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2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

City Council Meeting

Item Number: 19

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: **The proposed granting of oil and gas well permits to Endeavor Energy Resources, L.P. (“Operator”) for the drilling of the following oil and gas wells: Elkins Atrelle 31-42 #112; Elkins Atrelle 31-42 #113; Elkins Atrelle 31-42 #114; Elkins Atrelle 31-42 #123; Elkins Atrelle 31-42 #211; and Elkins Atrelle 31-42 #221; said wells being generally located between 500 feet and 501 feet south of East Cynthia Drive extension and between 1,096 feet and 1,221 feet west of Todd Drive. (DISTRICT 2) (DEVELOPMENT SERVICES)**

Purpose:

The proposed granting of oil and gas well permits to Endeavor Energy Resources, L.P. (“Operator”) for the drilling of the following oil and gas wells: Elkins Atrelle 31-42 #112; Elkins Atrelle 31-42 #113; Elkins Atrelle 31-42 #114; Elkins Atrelle 31-42 #123; Elkins Atrelle 31-42 #211; and Elkins Atrelle 31-42 #221; said wells being generally located between 500 feet and 501 feet south of East Cynthia Drive extension and between 1,096 feet and 1,221 feet west of Todd Drive. Council may consider these permits following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibits. A 24 ft. sound wall will be used during fracturing operations

only and walls will be located on the west and east side of the location. Included is a noise modeling study for drilling and fracturing operations at the pad site. The noise study states drilling below ambient noise levels at edge of property. In addition, a variance request is being made for electric driven gas lift compressor which includes a noise modeling study. The noise modeling study includes locating permanent sound panels being 16 ft tall on the west and south side of the compressor. The mitigated sound at the property lines to be below the nighttime ambient. The 140-acre location has already been granted an electric drive compressor and currently being used. The operator has a surface agreement. Receiving support of the Oil & Gas Advisory Committee, Endeavor Energy Resources is requesting the following variances:

(1) Endeavor Energy Resources requests to have a perimeter fence around the well pad site instead of individual wellheads.
(2) Endeavor Energy Resources requests to allow for twenty-four-hour fracing operations.
(3) Endeavor Energy Resources requests variance to the requirement of landscaping and irrigation. The land is currently undeveloped without access to City water.
(4) Endeavor Energy Resources requests a variance to utilize electric driven compression for gas lift operations.

Morris Williams Jr.

City Manager's Office

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
May 27, 2022	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	**Rep. Fax** (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 FM 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Ryan Burrow, Production Foreman for Endeavor Energy Resources, L.P.: Cell: 432-813-3060
Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C **–** is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application**. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Pasture

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

***ATTACHED AS EXHIBIT E* is a *(map/plat/satellite/aerial photo)* depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Elkins Atrelle 31-42 #112

***ATTACHED AS EXHIBIT G is* Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
***ATTACHED AS EXHIBIT G is* 24 Hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1847' FNL 1121' FEL, Section 31, Block 38, T-1-S, T&P RR Co Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Plat and Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K* is the location agreement letter with current Surface Owner. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M* is the Road Repair Agreement and *Letter of Credit/Certificate of Deposit/Surety Bond* in the amount of at least $75,000. *Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):* Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000 *letter of credit/certificate of deposit/surety bond* in conjunction with this request. [See § J(31)].**

***ATTACHED AS EXHIBIT N* is the written Concept Plan, Tank battery schematic and Site Plan. [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: Electricity TXU: 1-800-233-2133

(2) Operations: Electricity TXU: 1-800-233-2133

Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. If producing water from the Santa Rosa Aquifer is uneconomical; the Operator will use existing or new shallow wells within the 140 acre site to supplement supply. If the Operator is unable to develop and maintain an adequate supply from the water wells on site; fresh water shall be transported by truck or pipeline from a pre-arranged source to the fresh water pond located on the site.

Description of all electric lines to production facilities (reference exhibits as necessary)
***ATTACHED AS EXHIBIT G.* [See § L(10)]**

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
***ATTACHED AS EXHIBIT O.* [See § J(35)]**

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the** ***Blanket Bond and Rider*** **in accordance with Subsection (K)(2). [See § J(18)].**

ATTACHED AS EXHIBIT Q **is an Affidavit indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].**

ATTACHED AS EXHIBIT R **is the required Insurance Certificate. [See § J(19) and § K(3)].**

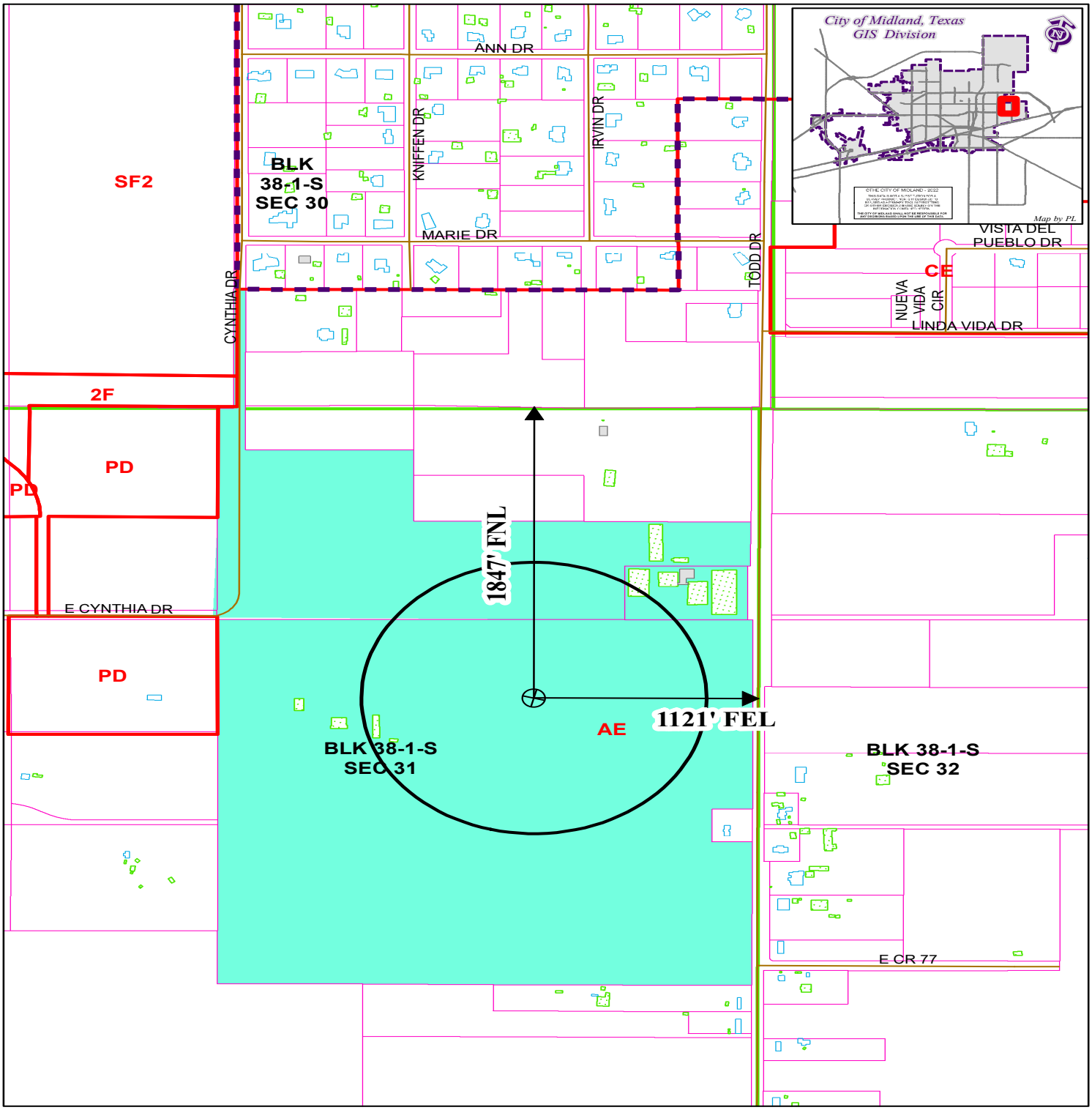
ATTACHED AS EXHIBIT S (if applicable) **is the Drainage Plan approved by the City Engineer relating to Applicant's proposed operations. [See § J(21)].**

ATTACHED AS EXHIBIT T **is Applicant's Emergency Action Response Plan. [See § J(22)].**

ATTACHED AS EXHIBIT U **is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V **is Summary List of Variances**

ATTACHED AS EXHIBIT W **is Acoustic Impact Study/Mitigation Plan**



LOCATION AND ZONING MAP

Oil - 044227 - 2022 **Scale: 1" = 700'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,847' FNL and 1,121' FEL, Section 31, Block 38, T-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 501 feet south of East Cynthia Drive extension and 1,121 feet west of Todd Drive.

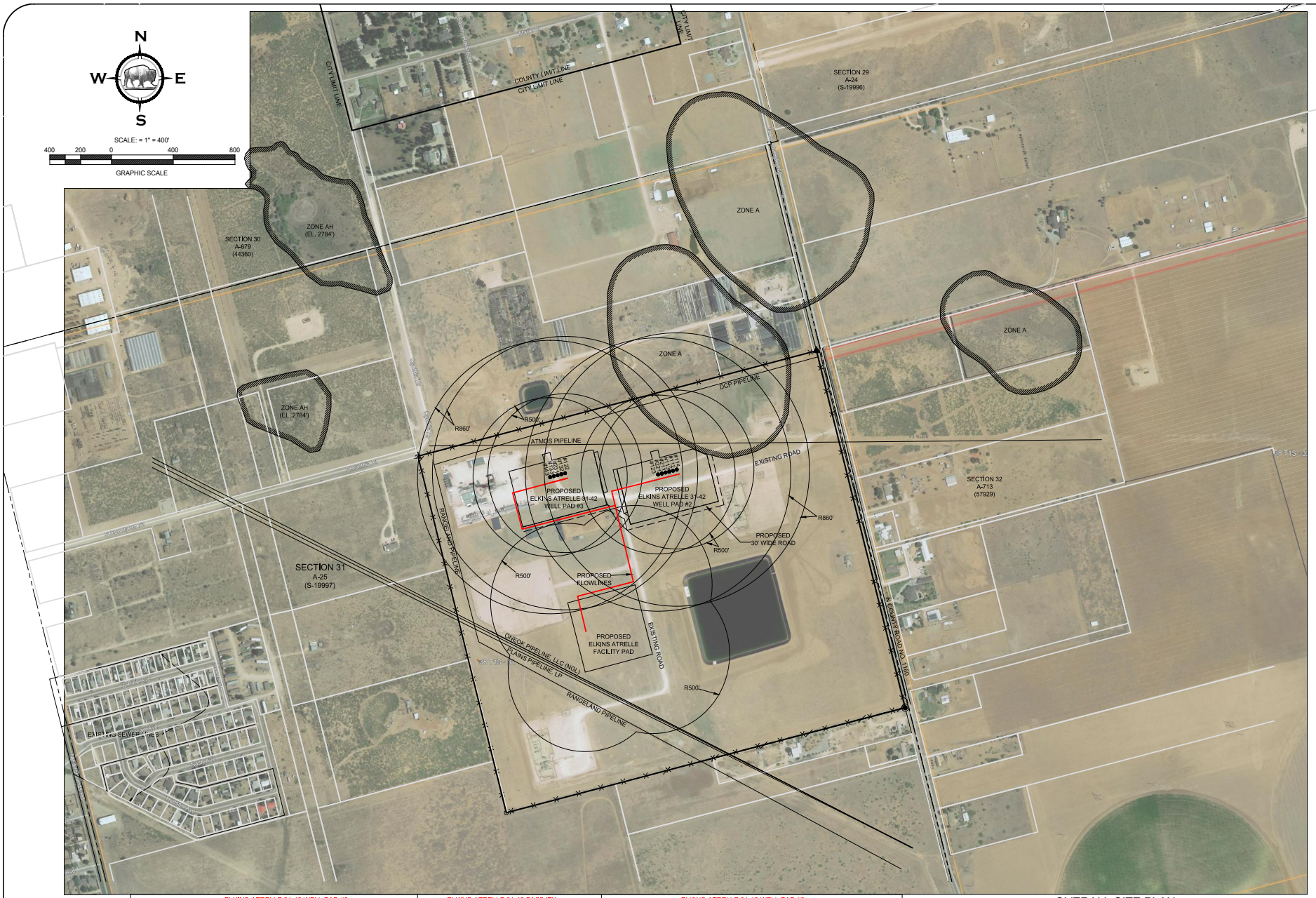
Elkins Atrelle 31-42 #112

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
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2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY



ELKINS-ATRELLE 31-42 WELL PAD #2		ELKINS-ATRELLE 31-42 FACILITY	ELKINS-ATRELLE 31-42 WELL PAD #3	
ELKINS-ATRELLE 31-42 #114 (SHL) NORTHING: 10707391.3 EASTING: 1766440.3	ELKINS-ATRELLE 31-42 #221 (SHL) NORTHING: 10707366.7 EASTING: 1766343.4	CENTER OF ELKINS-ATRELLE FACILITY PAD #1 NORTHING: 10706392.2 EASTING: 1766008.6	ELKINS-ATRELLE 31-42 #122 (SHL) NORTHING: 10707368.9 EASTING: 1765716.7	ELKINS-ATRELLE 31-42 #143 (SHL) NORTHING: 10707344.2 EASTING: 1765619.8
ELKINS-ATRELLE 31-42 #112 (SHL) NORTHING: 10707385.2 EASTING: 1766416.1	ELKINS-ATRELLE 31-42 #123 (SHL) NORTHING: 10707360.6 EASTING: 1766319.2		ELKINS-ATRELLE 31-42 #132 (SHL) NORTHING: 10707362.7 EASTING: 1765692.5	
ELKINS-ATRELLE 31-42 #113 (SHL) NORTHING: 10707379.0 EASTING: 1766391.9			ELKINS-ATRELLE 31-42 #231 (SHL) NORTHING: 10707356.6 EASTING: 1765668.2	CENTER OF ELKINS-ATRELLE WELL PAD #3 NORTHING: 10707274.5 EASTING: 1765670.2
ELKINS-ATRELLE 31-42 #211 (SHL) NORTHING: 10707372.9 EASTING: 1766367.6	CENTER OF ELKINS-ATRELLE WELL PAD #2 NORTHING: 10707293.8 EASTING: 1766381.2	COORDINATES SHOWN ARE THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE NAD 83	ELKINS-ATRELLE 31-42 #133 (SHL) NORTHING: 10707350.1 EASTING: 1765644.0	

OVERALL SITE PLAN

SCALE: 1"=400'

LEGEND

- PROPOSED FLOWLINE
- PROPOSED ELECTRIC
- PROPOSED LEASE ROAD
- PROPOSED FUTURE LEASE ROAD
- PROPOSED FRESH WATER LINE
- PROPOSED 8'6" CATTLE GUARD W/ 3 STRANDS OF BARB WIRE AROUND

PACKET 19.7 August 9, 2022

BISON CREEK
LAND SERVICES, LLC
WWW.BISON-CREEK.COM
FIRM LICENSE NO. 10193880

COPYRIGHT 2022

OVERALL SITE PLAN

ELKINS / ATRELLE & HARVARD / McCLINTIC
BEING A 141.796 ACRE TRACT OF LAND SITUATED IN THE CITY OF MIDLAND, SECTION 31, BLOCK 38, T-1-S, T & P RR CO. SURVEY, ABSTRACT NO. 25, MIDLAND COUNTY, TEXAS.

ENDEAVOR ENERGY RESOURCES, L.P.

SCALE: 1" = 400'
DATE: 05/17/22
APPROVED BY: JPK
DRAWN BY: CR
CREW: 2L
PROJECT NO.16-02490

SHEET 1 OF 1

BISON CREEK LAND SERVICES, LLC 29740 STATE HIGHWAY 64, CANTON TEXAS 75103 PHONE: 903-873-3800 WWW.BISON-CREEK.COM

Z:\BISON CREEK, LLC\2016\16-02490-ENDEAVOR MIDLAND COUNTY\MIDLAND CO PROJECTS\BLOCK 38 T1S ELKINS-ATRELLE HARVARD MCCLINTIC\DRAWING\SECTION 31\SITE PLANS\16-02490 - OVERALL SITE PLAN 3-(5-17-22).dwg, 5/26/2022 9:47:55 AM

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
May 27, 2022	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	**Rep. Fax** (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 FM 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Ryan Burrow, Production Foreman for Endeavor Energy Resources, L.P.: Cell: 432-813-3060
Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C **–** is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application**. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Pasture

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

***ATTACHED AS EXHIBIT E* is a *(map/plat/satellite/aerial photo)* depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Elkins Atrelle 31-42 #113

***ATTACHED AS EXHIBIT G is* Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
***ATTACHED AS EXHIBIT G is* 24 Hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1846' FNL 1146' FEL, Section 31, Block 38, T-1-S, T&P RR Co Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Plat and Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

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***ATTACHED AS EXHIBIT M* is the Road Repair Agreement and *Letter of Credit/Certificate of Deposit/Surety Bond* in the amount of at least $75,000. *Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):* Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000 *letter of credit/certificate of deposit/surety bond* in conjunction with this request. [See § J(31)].**

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(1) Drilling: Electricity TXU: 1-800-233-2133

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Description of all electric lines to production facilities (reference exhibits as necessary)
***ATTACHED AS EXHIBIT G.* [See § L(10)]**

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
***ATTACHED AS EXHIBIT O.* [See § J(35)]**

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the *Blanket Bond and Rider* in accordance with Subsection (K)(2). [See § J(18)].**

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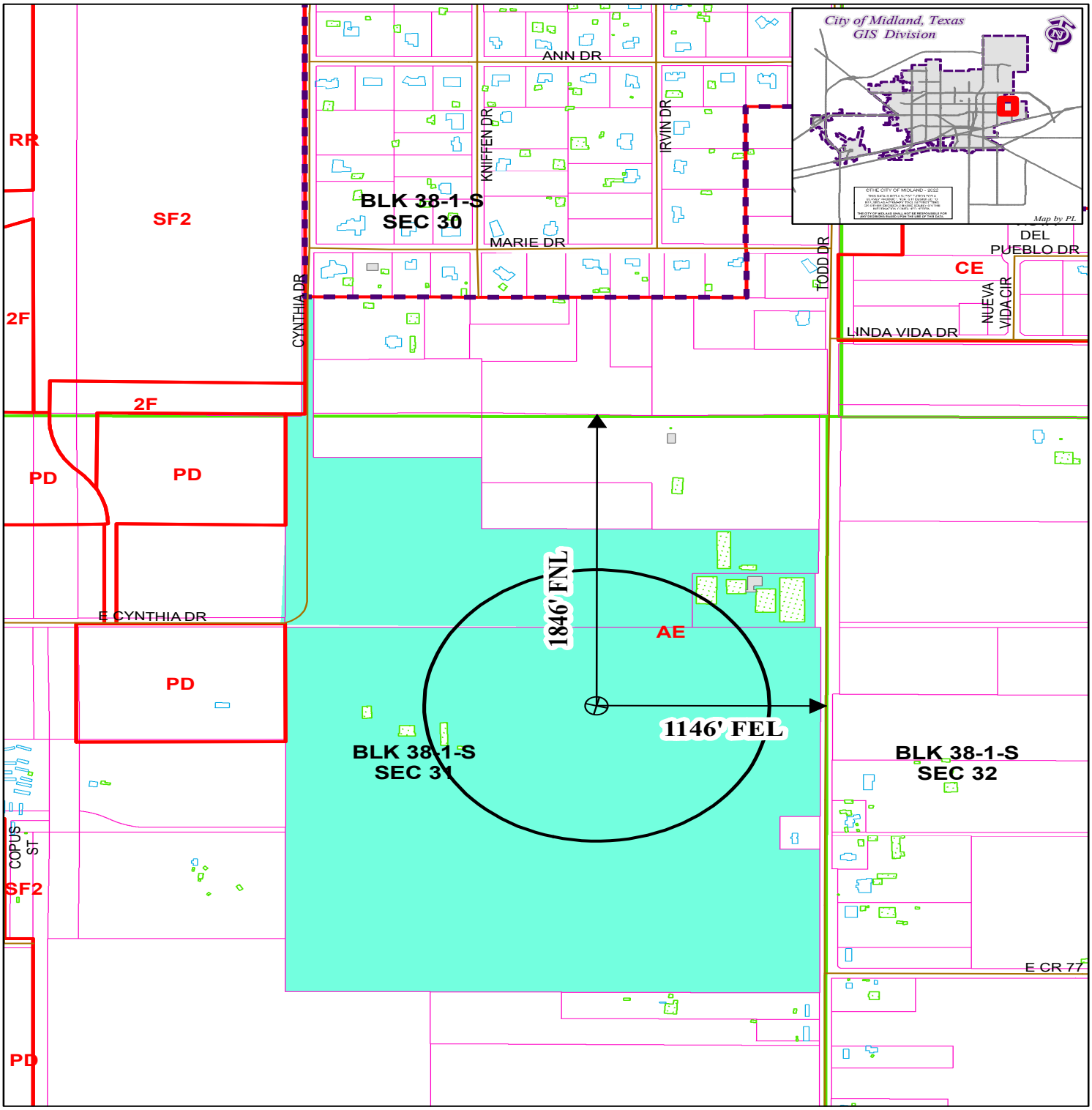
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ATTACHED AS EXHIBIT W **is Acoustic Impact Study/Mitigation Plan**



LOCATION AND ZONING MAP

Oil - 044228 - 2022 **Scale: 1" = 700'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,846' FNL and 1,146' FEL, Section 31, Block 38, T-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 500 feet south of East Cynthia Drive extension and 1,146 feet west of Todd Drive.

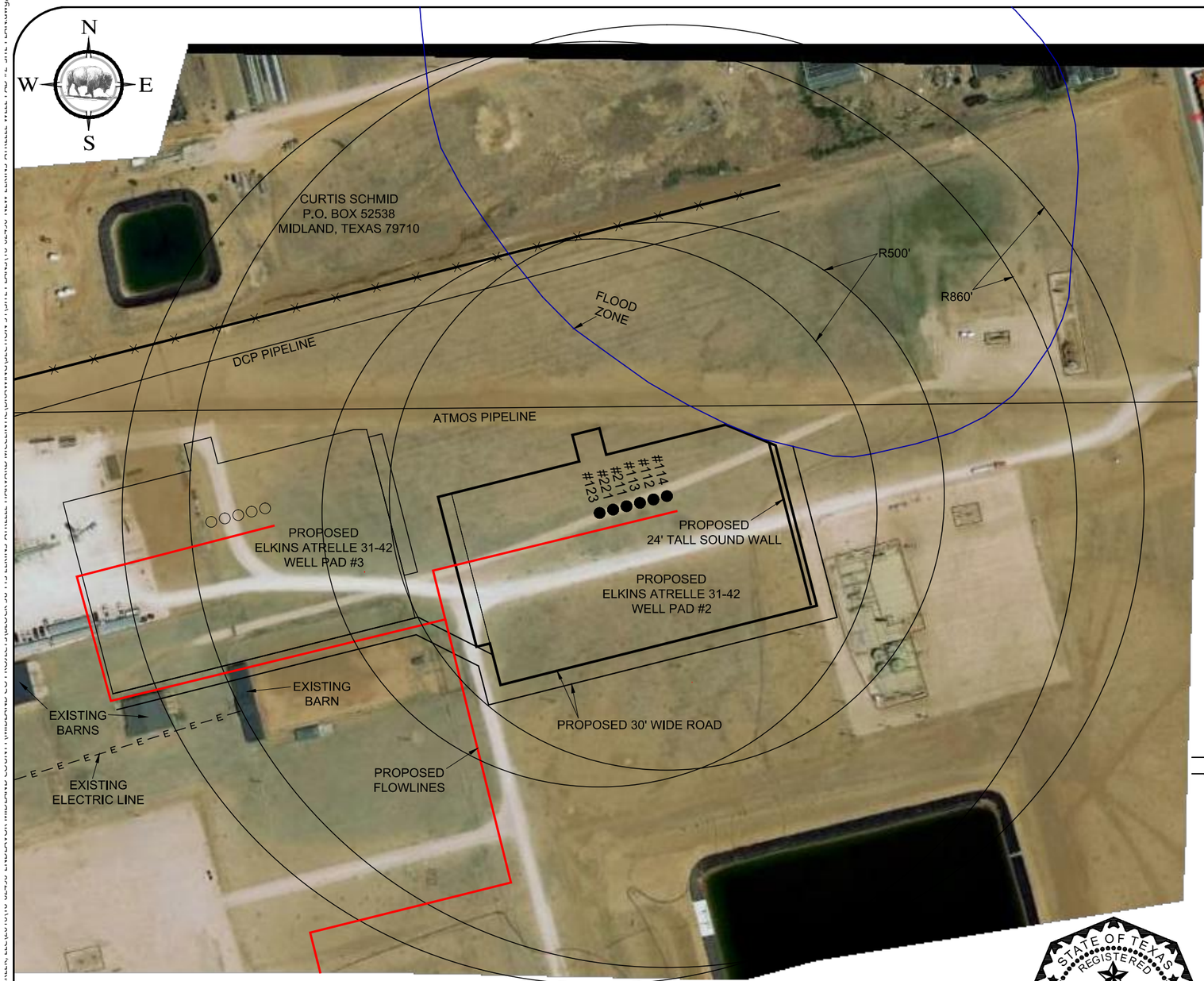
Elkins Atrelle 31-42 #113

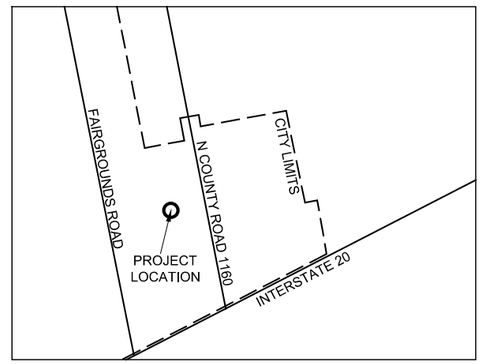
LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

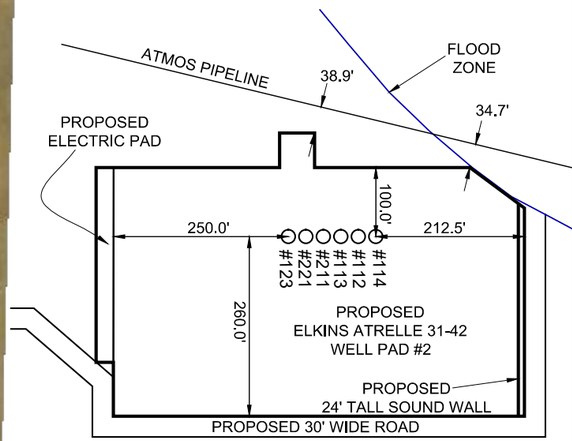
ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NA	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	C1, C2, C3	COMMERCIAL
MH	MOBILE HOME DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
TH	TOWNHOUSE DWELLING	LI	LIGHT INDUSTRY
2F	TWO-FAMILY DWELLING	HI	HEAVY INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING		





VICINITY MAP
NOT TO SCALE



LAYOUT PLAN
1" = 200'

COORDINATES SHOWN ARE THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE NAD 83		
ELKINS-ATRELLE 31-32 #221 (SHL) NORTHING: 10707366.72 EASTING: 1766343.39	ELKINS-ATRELLE 31-42 #113 (SHL) NORTHING: 10707379.02 EASTING: 1766391.86	ELKINS-ATRELLE 31-42 #114 (SHL) NORTHING: 10707391.33 EASTING: 1766440.32
ELKINS-ATRELLE 31-32 #123 (SHL) NORTHING: 10707360.56 EASTING: 1766319.16	ELKINS-ATRELLE 31-32 #211 (SHL) NORTHING: 10707372.87 EASTING: 1766367.63	ELKINS-ATRELLE 31-32 #112 (SHL) NORTHING: 10707385.18 EASTING: 1766416.09

SITE PLAN
1" = 200'
SCALE: 1" = 200'

200 100 0 200 400
GRAPHIC SCALE

STATE OF TEXAS
REGISTERED
JAMES P. KEENE
5100
PROFESSIONAL
LAND SURVEYOR

LEGEND

- PROPOSED FLOWLINE
- E — PROPOSED ELECTRIC
- PROPOSED LEASE ROAD
- PROPOSED FUTURE LEASE ROAD
- W — PROPOSED FRESH WATER LINE

BISON CREEK
LAND SERVICES, LLC
WWW.BISON-CREEK.COM

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FIRM LICENSE NO. 10193880

BISON CREEK LAND SERVICES, LLC 29740 STATE HIGHWAY 64, CANTON, TEXAS 75103 PHONE: (903) 873 - 3600

SITE PLAN

ENDEAVOR ENERGY RESOURCES, L.P.

ELKINS ATRELLE WELL PAD #2
SITUATED IN THE
CITY OF MIDLAND, SECTION 31, BLOCK 38, T-1-S, T & P RR
CO. SURVEY, ABSTRACT NO. 25, MIDLAND COUNTY, TEXAS.

SCALE: 1"= 200' | DATE: 04/18/22
DRAWN BY: CR
APPROVED: JPK
FIELD CREW: JR
PROJECT NO. 16-02490-ELKINS-ATRELLE WELL PAD #2

SHEET
1
OF 1

PACKET
19.12
August 9, 2022

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
May 27, 2022	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	**Rep. Fax** (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 FM 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
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Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C **–** is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application**. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Pasture

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

***ATTACHED AS EXHIBIT E* is a *(map/plat/satellite/aerial photo)* depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Elkins Atrelle 31-42 #114

***ATTACHED AS EXHIBIT G is* Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
***ATTACHED AS EXHIBIT G is* 24 Hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1847' FNL 1096' FEL, Section 31, Block 38, T-1-S, T&P RR Co Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Plat and Location Site Plan [See § J(9)].**

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***ATTACHED AS EXHIBIT N* is the written Concept Plan, Tank battery schematic and Site Plan. [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: Electricity TXU: 1-800-233-2133

(2) Operations: Electricity TXU: 1-800-233-2133

Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. If producing water from the Santa Rosa Aquifer is uneconomical; the Operator will use existing or new shallow wells within the 140 acre site to supplement supply. If the Operator is unable to develop and maintain an adequate supply from the water wells on site; fresh water shall be transported by truck or pipeline from a pre-arranged source to the fresh water pond located on the site.

Description of all electric lines to production facilities (reference exhibits as necessary)
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Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
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V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the *Blanket Bond and Rider* in accordance with Subsection (K)(2). [See § J(18)].**

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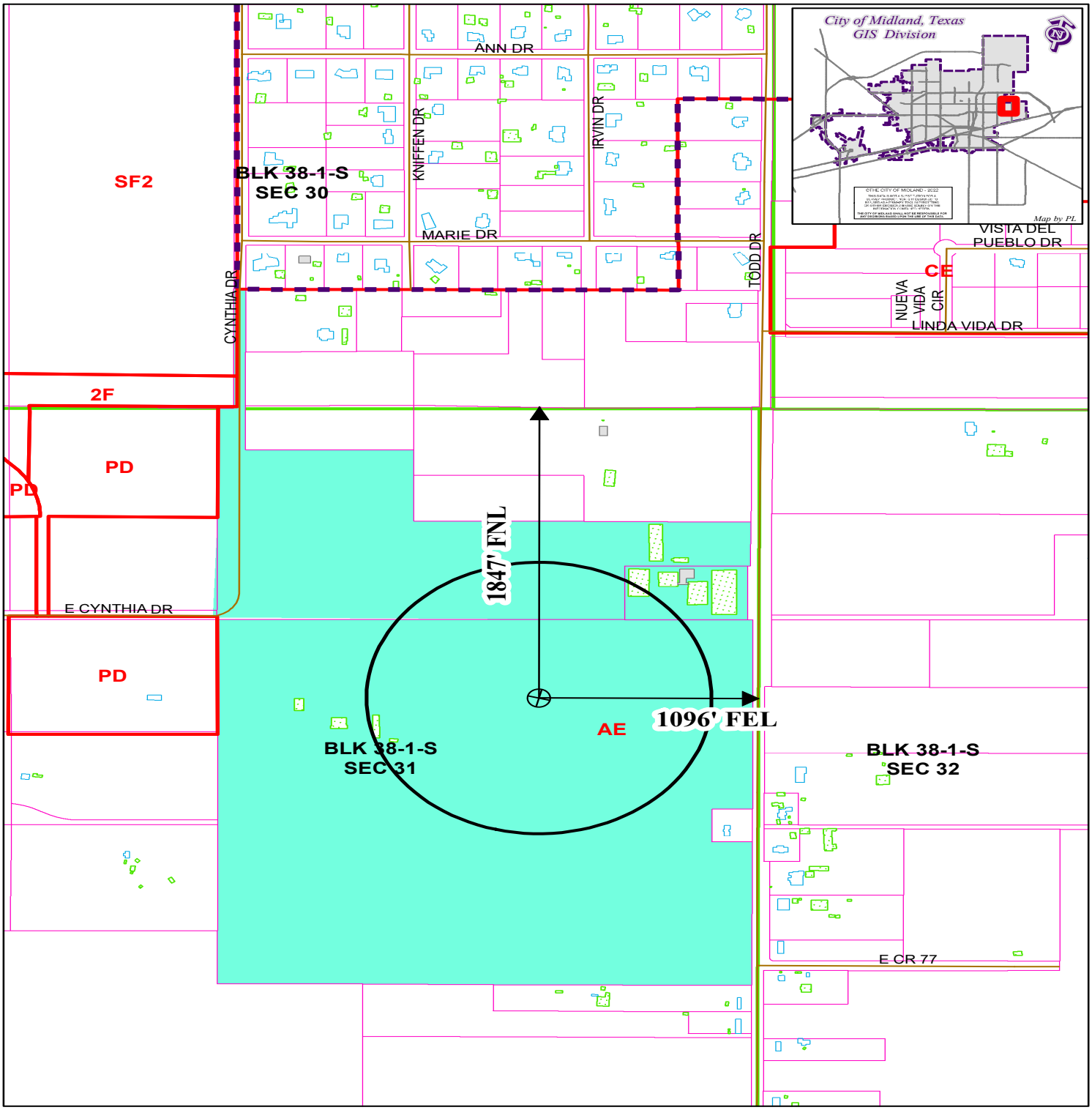
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LOCATION AND ZONING MAP

Oil - 044229 - 2022 **Scale: 1" = 700'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,847' FNL and 1,096' FEL, Section 31, Block 38, T-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 501 feet south of East Cynthia Drive extension and 1,096 feet west of Todd Drive.

Elkins Atrelle 31-42 #114

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

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Planning Division

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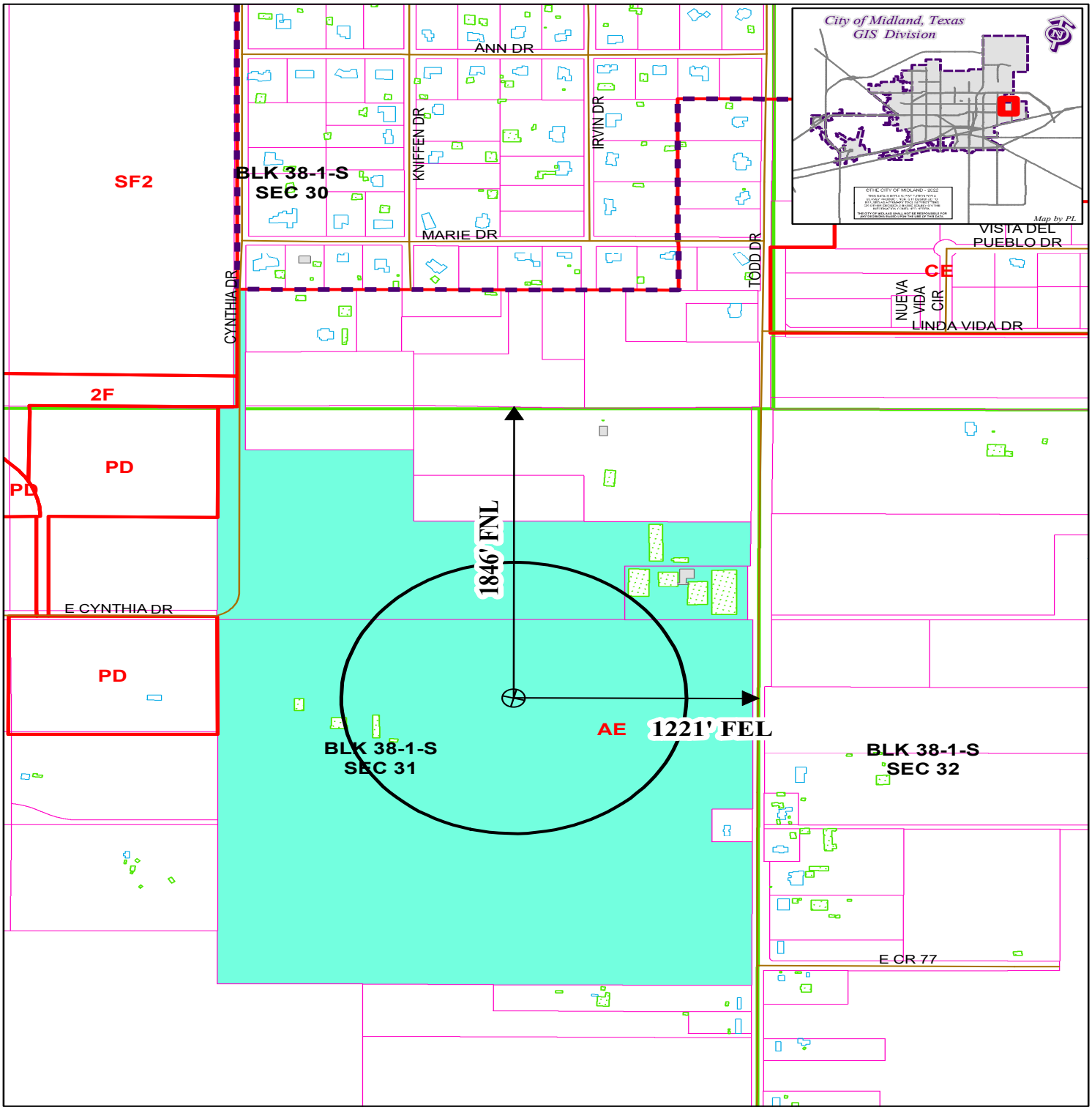
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ATTACHED AS EXHIBIT U **is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V **is Summary List of Variances**

ATTACHED AS EXHIBIT W **is Acoustic Impact Study/Mitigation Plan**



LOCATION AND ZONING MAP

Oil - 044231 - 2022 **Scale: 1" = 700'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,846' FNL and 1,221' FEL, Section 31, Block 38, T-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 500 feet south of East Cynthia Drive extension and 1,221 feet west of Todd Drive.

Elkins Atrelle 31-42 #123

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
May 27, 2022	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	**Rep. Fax** (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 FM 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Ryan Burrow, Production Foreman for Endeavor Energy Resources, L.P.: Cell: 432-813-3060
Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C **–** is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application**. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Pasture

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

***ATTACHED AS EXHIBIT E* is a *(map/plat/satellite/aerial photo)* depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Elkins Atrelle 31-42 #211

***ATTACHED AS EXHIBIT G is* Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
***ATTACHED AS EXHIBIT G is* 24 Hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1846' FNL 1171' FEL, Section 31, Block 38, T-1-S, T&P RR Co Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Plat and Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

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***ATTACHED AS EXHIBIT K* is the location agreement letter with current Surface Owner. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M* is the Road Repair Agreement and *Letter of Credit/Certificate of Deposit/Surety Bond* in the amount of at least $75,000. *Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):* Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000 *letter of credit/certificate of deposit/surety bond* in conjunction with this request. [See § J(31)].**

***ATTACHED AS EXHIBIT N* is the written Concept Plan, Tank battery schematic and Site Plan. [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: Electricity TXU: 1-800-233-2133

(2) Operations: Electricity TXU: 1-800-233-2133

Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. If producing water from the Santa Rosa Aquifer is uneconomical; the Operator will use existing or new shallow wells within the 140 acre site to supplement supply. If the Operator is unable to develop and maintain an adequate supply from the water wells on site; fresh water shall be transported by truck or pipeline from a pre-arranged source to the fresh water pond located on the site.

Description of all electric lines to production facilities (reference exhibits as necessary)
***ATTACHED AS EXHIBIT G.* [See § L(10)]**

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
***ATTACHED AS EXHIBIT O.* [See § J(35)]**

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the *Blanket Bond and Rider* in accordance with Subsection (K)(2). [See § J(18)].**

ATTACHED AS EXHIBIT Q **is an Affidavit indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].**

ATTACHED AS EXHIBIT R **is the required Insurance Certificate. [See § J(19) and § K(3)].**

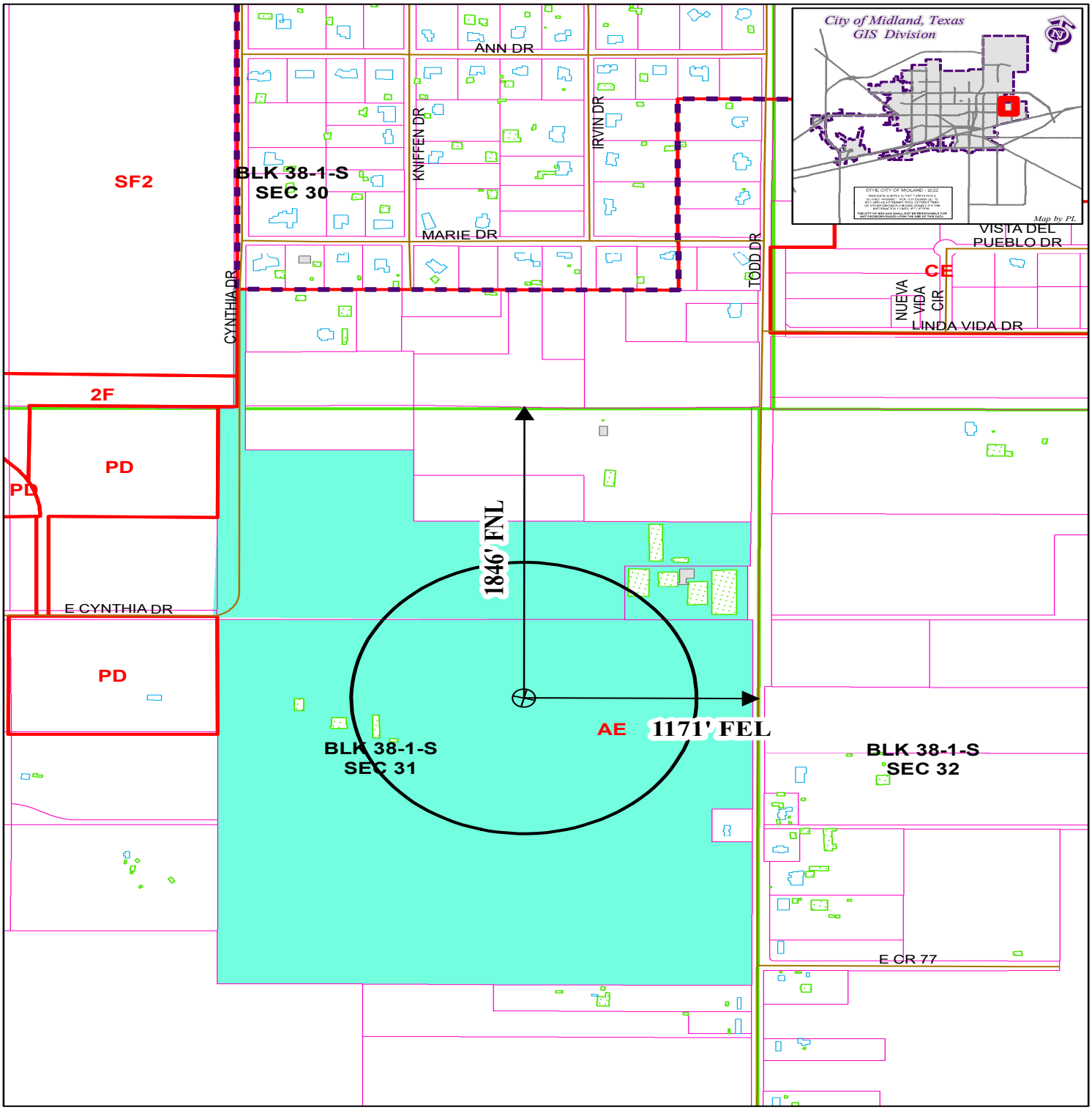
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ATTACHED AS EXHIBIT W **is Acoustic Impact Study/Mitigation Plan**



LOCATION AND ZONING MAP

Oil - 044235 - 2022 **Scale: 1" = 700'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,846' FNL and 1,171' FEL, Section 31, Block 38, T-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 500 feet south of East Cynthia Drive extension and 1,171 feet west of Todd Drive.

Elkins Atrelle 31-42 #211

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
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CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
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TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
May 27, 2022	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

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General Description of Current Surface Use (within 860 feet of proposed surface location): Open Pasture

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IV. Well & Operations Information

Proposed Well Name: Elkins Atrelle 31-42 #221

***ATTACHED AS EXHIBIT G is* Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
***ATTACHED AS EXHIBIT G is* 24 Hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1846' FNL 1196' FEL, Section 31, Block 38, T-1-S, T&P RR Co Survey, Midland County, Texas

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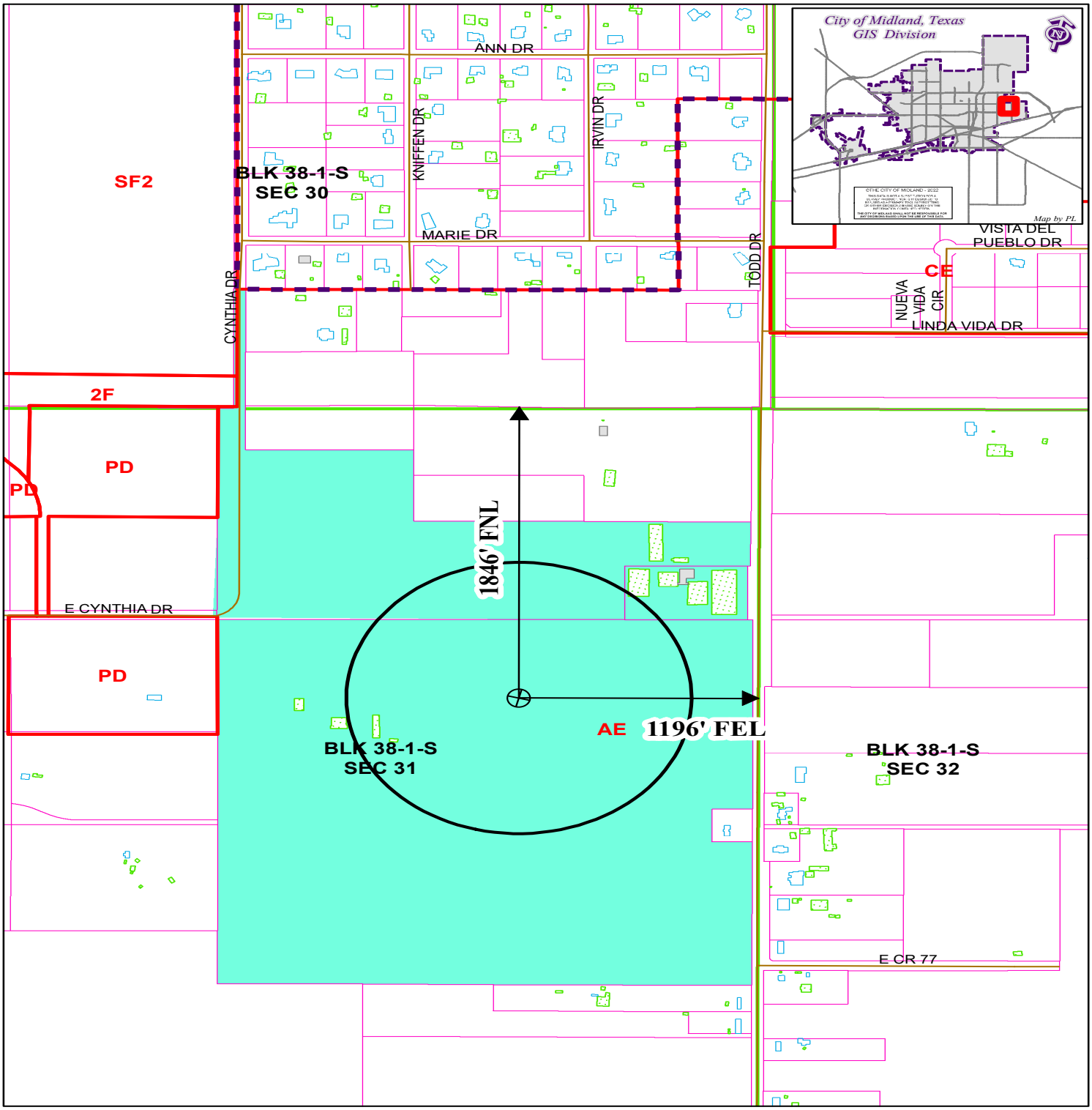
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ATTACHED AS EXHIBIT W **is Acoustic Impact Study/Mitigation Plan**



LOCATION AND ZONING MAP

Oil - 044237 - 2022 **Scale: 1" = 700'**

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Generally located 500 feet south of East Cynthia Drive extension and 1,196 feet west of Todd Drive.

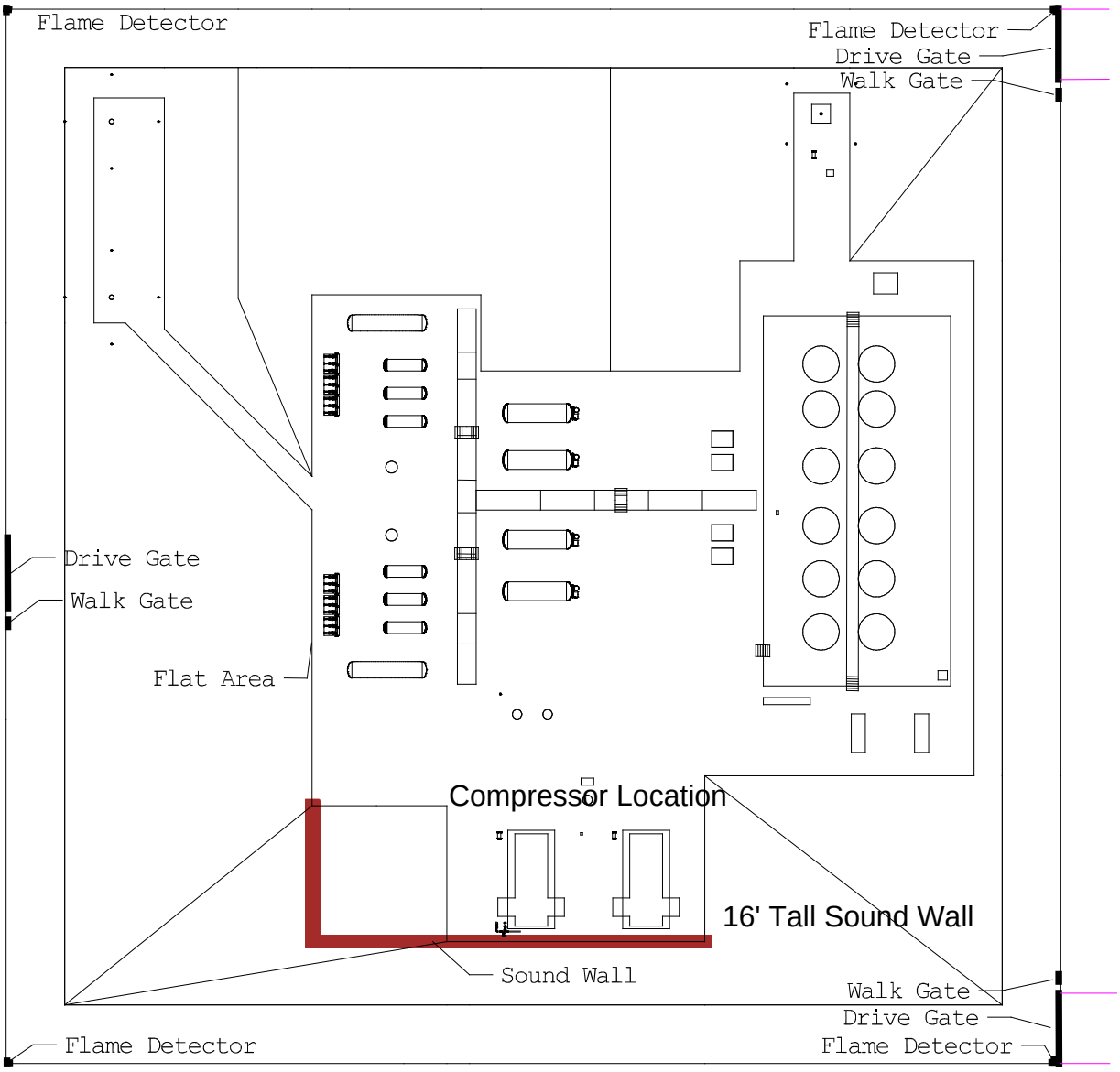
Elkins Atrelle 31-42 #221

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	O1, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
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2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY


Flame Detector
Flame Detector
Drive Gate
Walk Gate
Drive Gate
Walk Gate
Flat Area
Compressor Location
16' Tall Sound Wall
Sound Wall
Walk Gate
Drive Gate
Flame Detector
Flame Detector

50 ft

City Council Meeting

Item Number: 20

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: **The proposed granting of oil and gas well permits to Endeavor Energy Resources, L.P. (“Operator”) for the drilling of the following oil and gas wells: Elkins Atrelle 31-42 #122; Elkins Atrelle 31-42 #132; Elkins Atrelle 31-42 #133; Elkins Atrelle 31-42 #143; and Elkins Atrelle 31-42 #231; said wells being generally located 359 feet south of East Cynthia Drive extension and between 1,803 feet and 1,903 feet west of Todd Drive (DISTRICT 2) (DEVELOPMENT SERVICES)**

Purpose:

The proposed granting of oil and gas well permits to Endeavor Energy Resources, L.P. (“Operator”) for the drilling of the following oil and gas wells: Elkins Atrelle 31-42 #122; Elkins Atrelle 31-42 #132; Elkins Atrelle 31-42 #133; Elkins Atrelle 31-42 #143; and Elkins Atrelle 31-42 #231; said wells being generally located 359 feet south of East Cynthia Drive extension and between 1,803 feet and 1,903 feet west of Todd Drive. Council may consider these permits following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibits. A 24 ft. sound wall will be used during fracturing operations only and walls will be being located on west side of the location. Included is a noise modeling

study for drilling and fracturing operations at the pad site. The noise study states drilling below ambient noise levels at edge of property. In addition, a variance request is being made for electric driven gas lift compressor which includes a noise modeling study. The noise modeling study includes locating permanent sound panels being 16 ft tall on the west and south side of the electric drive compressor. The mitigated sound at the property lines to be below the nighttime ambient. The 140-acre location has already been granted an electric drive compressor and currently being used. The operator has a surface agreement. Receiving support of the Oil & Gas Advisory Committee, Endeavor Energy Resources is requesting the following variances:

(1) Endeavor Energy Resources requests to have a perimeter fence around the well pad site instead of individual wellheads.
(2) Endeavor Energy Resources requests to allow for twenty-four-hour fracing operations.
(3) Endeavor Energy Resources requests variance to the requirement of landscaping and irrigation. The land is currently undeveloped without access to City water.
(4) Endeavor Energy Resources requests a variance to utilize electric driven compression for gas lift operations.
(5) Endeavor Energy Resources requests variance to utilize storage tanks 30’ in height to allow a reduced overall footprint. Battery will be 720 feet from the property line.

Morris Williams Jr.

City Manager’s Office

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
May 27, 2022	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

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Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

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IV. Well & Operations Information

Proposed Well Name: Elkins Atrelle 31-42 #122

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Legal Description of Proposed Well Site:

Surface Hole Location: 1689' FNL 1803' FEL, Section 31, Block 38, T-1-S, T&P RR Co Survey, Midland County, Texas

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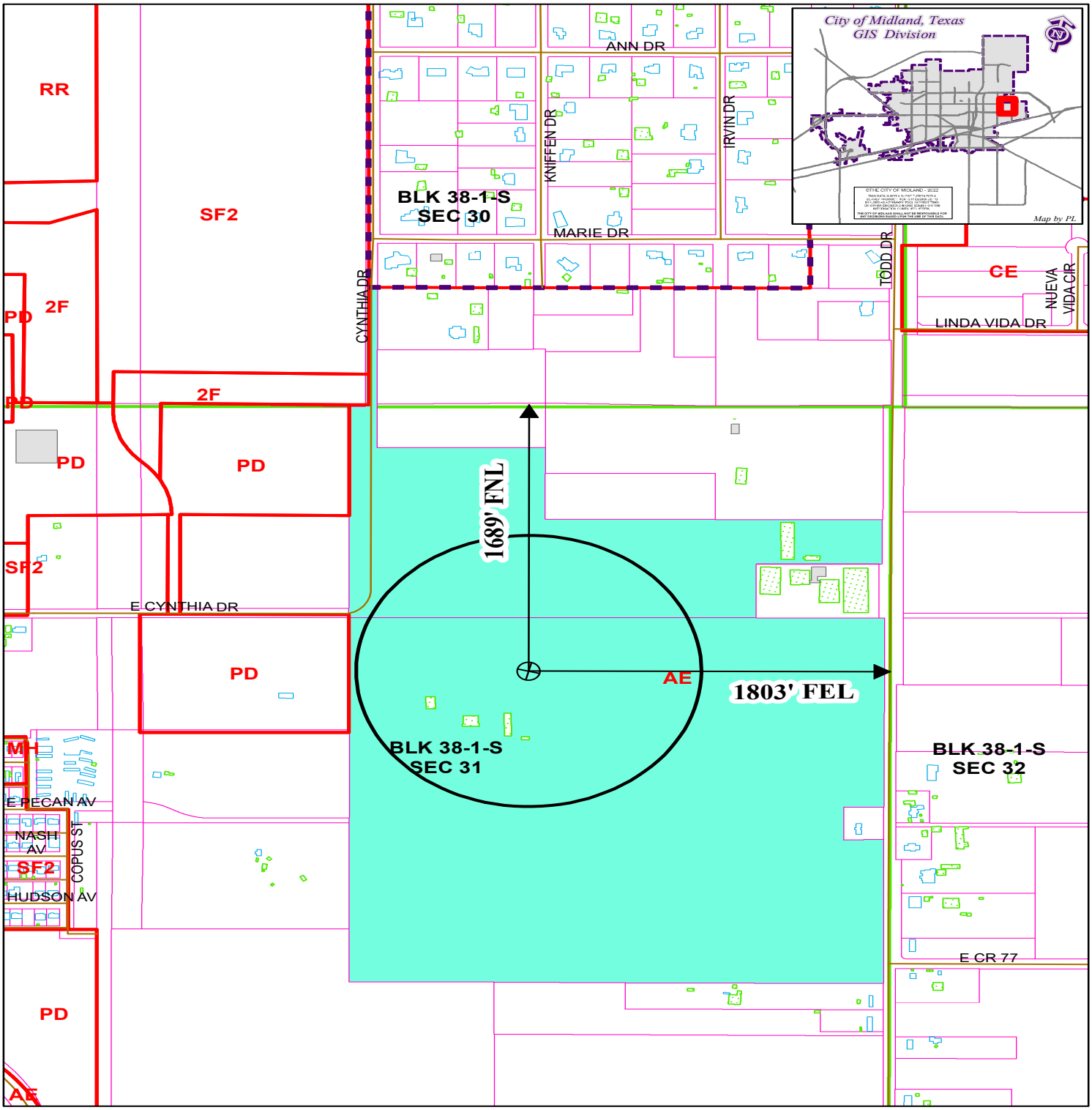
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ATTACHED AS EXHIBIT W **is Acoustic Impact Study/Mitigation Plan**



LOCATION AND ZONING MAP

Oil - 044230 - 2022 **Scale: 1" = 700'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,689' FNL and 1,803' FEL, Section 31, Block 38, T-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 359 feet south of East Cynthia Drive extension and 1,803 feet west of Todd Drive.

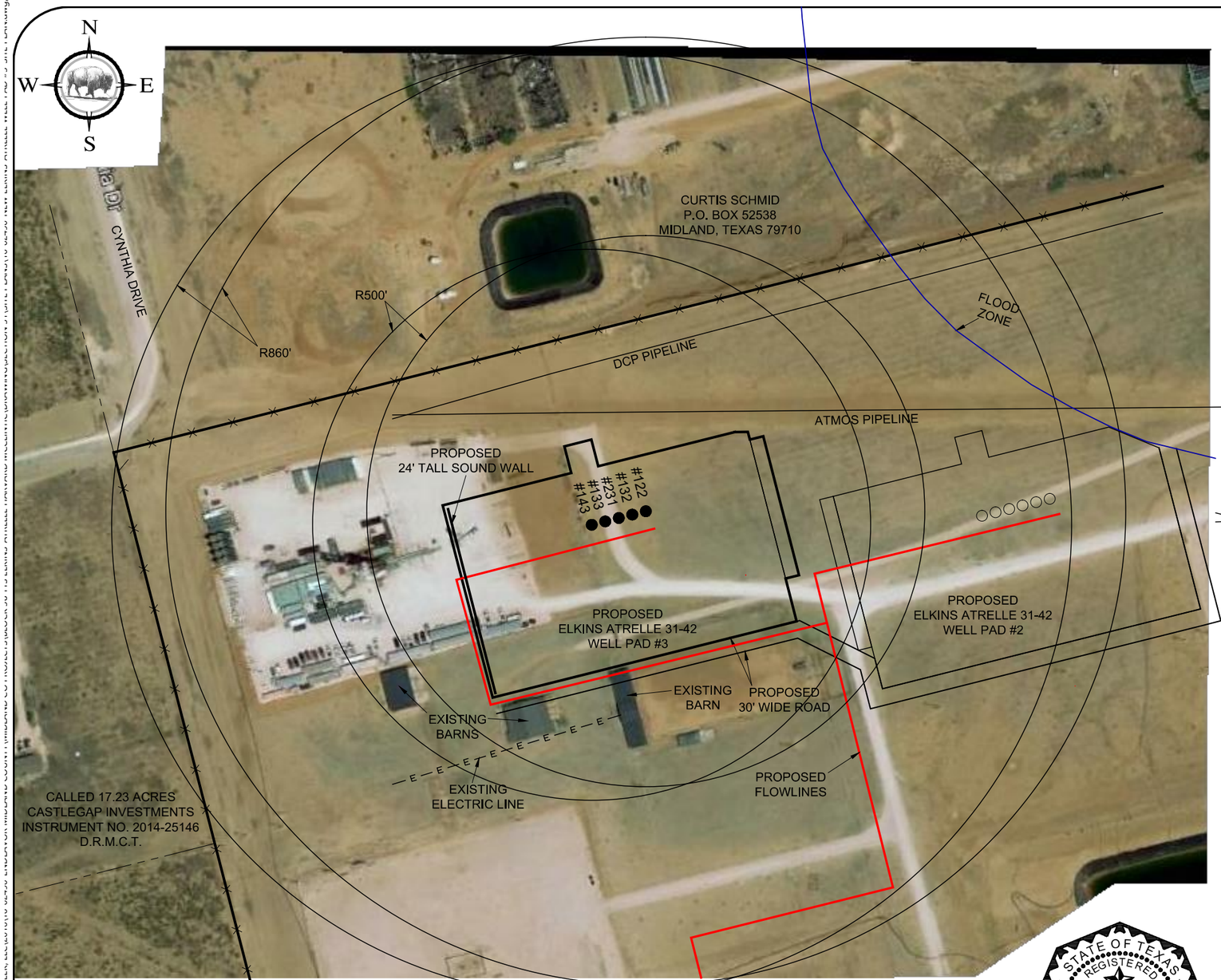
Elkins Atrelle 31-42 #122

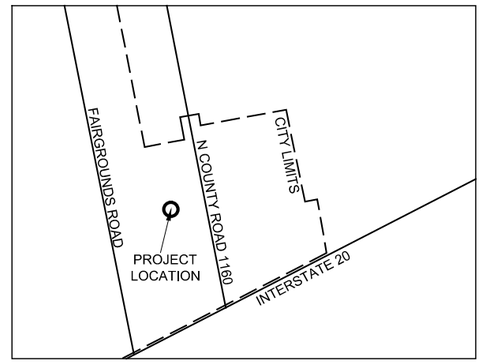
LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

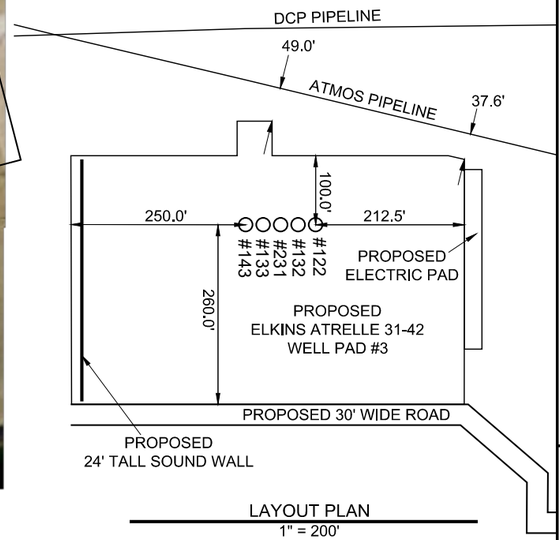
ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
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CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
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2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY





VICINITY MAP
NOT TO SCALE



LAYOUT PLAN
1" = 200'

COORDINATES SHOWN ARE THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE NAD 83		
ELKINS-ATRELLE 31-32 #143 (SHL) NORTHING: 10707344.24 EASTING: 1765619.76	ELKINS-ATRELLE 31-42 #231 (SHL) NORTHING: 10707356.55 EASTING: 1765668.22	ELKINS-ATRELLE 31-42 #122 (SHL) NORTHING: 10707368.85 EASTING: 1765716.68
	ELKINS-ATRELLE 31-32 #133 (SHL) NORTHING: 10707350.39 EASTING: 1765643.99	ELKINS-ATRELLE 31-32 #132 (SHL) NORTHING: 10707362.70 EASTING: 1765692.45

SITE PLAN
1" = 200'
SCALE: 1" = 200'

200 100 0 200 400
GRAPHIC SCALE

STATE OF TEXAS
REGISTERED
JAMES P. KEENE
5100
PROFESSIONAL
LAND SURVEYOR

LEGEND
- PROPOSED FLOWLINE
- E — PROPOSED ELECTRIC
- PROPOSED LEASE ROAD
- PROPOSED FUTURE LEASE ROAD
- W — PROPOSED FRESH WATER LINE

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LAND SERVICES, LLC
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FIRM LICENSE NO. 10193880
BISON CREEK LAND SERVICES, LLC 29740 STATE HIGHWAY 64, CANTON, TEXAS 75103 PHONE: (903) 873 - 3600

SITE PLAN
ENDEAVOR ENERGY RESOURCES, L.P.
ELKINS ATRELLE WELL PAD #3
SITUATED IN THE
CITY OF MIDLAND, SECTION 31, BLOCK 38, T-1-S, T & P RR
CO. SURVEY, ABSTRACT NO. 25, MIDLAND COUNTY, TEXAS.

SCALE: 1"= 200' | DATE: 04/18/22
DRAWN BY: CR
APPROVED: JPK
FIELD CREW: JR
PROJECT NO. 16-02490-ELKINS-ATRELLE WELL PAD #3

SHEET
1
OF 1

Exhibit A Bison Creek Land Services, LLC 29740 State Highway 64 Canton, Texas 75103 (903) 873-3600 Endeavor Energy Resources, L.P. Elkins Atrelle Well Pad #3 Situated in the City of Midland, Section 31, Block 38, T-1-S, T & P RR Co. Survey, Abstract No. 25, Midland County, Texas. Midland County, Texas. Bison Creek Land Services, LLC 29740 State Highway 64, Canton, Texas 75103 (903) 873-3600



ELKINS-ATRELLE 31-42 WELL PAD #2		ELKINS-ATRELLE 31-42 FACILITY	ELKINS-ATRELLE 31-42 WELL PAD #3	
ELKINS-ATRELLE 31-42 #114 (SHL) NORTHING: 10707391.3 EASTING: 1766440.3	ELKINS-ATRELLE 31-42 #221 (SHL) NORTHING: 10707366.7 EASTING: 1766343.4	CENTER OF ELKINS-ATRELLE FACILITY PAD #1 NORTHING: 10706392.2 EASTING: 1766008.6	ELKINS-ATRELLE 31-42 #122 (SHL) NORTHING: 10707368.9 EASTING: 1765716.7	ELKINS-ATRELLE 31-42 #143 (SHL) NORTHING: 10707344.2 EASTING: 1765619.8
ELKINS-ATRELLE 31-42 #112 (SHL) NORTHING: 10707385.2 EASTING: 1766416.1	ELKINS-ATRELLE 31-42 #123 (SHL) NORTHING: 10707360.6 EASTING: 1766319.2		ELKINS-ATRELLE 31-42 #132 (SHL) NORTHING: 10707362.7 EASTING: 1765692.5	
ELKINS-ATRELLE 31-42 #113 (SHL) NORTHING: 10707379.0 EASTING: 1766391.9			ELKINS-ATRELLE 31-42 #231 (SHL) NORTHING: 10707356.6 EASTING: 1765668.2	CENTER OF ELKINS-ATRELLE WELL PAD #3 NORTHING: 10707274.5 EASTING: 1765670.2
ELKINS-ATRELLE 31-42 #211 (SHL) NORTHING: 10707372.9 EASTING: 1766367.6	CENTER OF ELKINS-ATRELLE WELL PAD #2 NORTHING: 10707293.8 EASTING: 1766381.2	COORDINATES SHOWN ARE THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE NAD 83	ELKINS-ATRELLE 31-42 #132 (BHL) NORTHING: 10707330.4 EASTING: 1765644.0	

OVERALL SITE PLAN

SCALE: 1"=400'

LEGEND
- PROPOSED FLOWLINE
- PROPOSED ELECTRIC
- PROPOSED LEASE ROAD
- PROPOSED FUTURE LEASE ROAD
- PROPOSED FRESH WATER LINE
- PROPOSED 8'6" GALVANIZED STRANDS OF BARB WIRE AROUND

PACKET 20.8 August 9, 2022

BISON CREEK
LAND SERVICES, LLC
WWW.BISON-CREEK.COM
FIRM LICENSE NO. 10193880

COPYRIGHT 2022

OVERALL SITE PLAN

ELKINS / ATRELLE & HARVARD / McCLINTIC
BEING A 141.796 ACRE TRACT OF LAND SITUATED IN THE CITY OF MIDLAND, SECTION 31, BLOCK 38, T-1-S, T & P RR CO. SURVEY, ABSTRACT NO. 25, MIDLAND COUNTY, TEXAS.

ENDEAVOR ENERGY RESOURCES, L.P.

BISON CREEK LAND SERVICES, LLC 29740 STATE HIGHWAY 64, CANTON TEXAS 75103 PHONE: 903-873-3800 WWW.BISON-CREEK.COM

SCALE: 1" = 400'
DATE: 05/17/22
APPROVED BY: JPK
DRAWN BY: CR
CREW: 2L
PROJECT NO.16-02490

SHEET 1 OF 1

Z:\BISON CREEK, LLC\2016\16-02490-ENDEAVOR MIDLAND CO\PROJECTS\BLOCK 38 T1S ELKINS-ATRELLE HARVARD MCCLINTIC\DRAWING\SECTION 31\SITE PLANS\16-02490 - OVERALL SITE PLAN 3-(5-17-22).dwg, 5/26/2022 9:47:55 AM

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
May 27, 2022	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	**Rep. Fax** (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 FM 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Ryan Burrow, Production Foreman for Endeavor Energy Resources, L.P.: Cell: 432-813-3060
Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C **–** is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application**. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Pasture

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

***ATTACHED AS EXHIBIT E* is a *(map/plat/satellite/aerial photo)* depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Elkins Atrelle 31-42 #132

***ATTACHED AS EXHIBIT G is* Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
***ATTACHED AS EXHIBIT G is* 24 Hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1689' FNL 1828' FEL, Section 31, Block 38, T-1-S, T&P RR Co Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Plat and Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

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***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M* is the Road Repair Agreement and *Letter of Credit/Certificate of Deposit/Surety Bond* in the amount of at least $75,000. *Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):* Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000 *letter of credit/certificate of deposit/surety bond* in conjunction with this request. [See § J(31)].**

***ATTACHED AS EXHIBIT N* is the written Concept Plan, Tank battery schematic and Site Plan. [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: Electricity TXU: 1-800-233-2133

(2) Operations: Electricity TXU: 1-800-233-2133

Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. If producing water from the Santa Rosa Aquifer is uneconomical; the Operator will use existing or new shallow wells within the 140 acre site to supplement supply. If the Operator is unable to develop and maintain an adequate supply from the water wells on site; fresh water shall be transported by truck or pipeline from a pre-arranged source to the fresh water pond located on the site.

Description of all electric lines to production facilities (reference exhibits as necessary)
***ATTACHED AS EXHIBIT G.* [See § L(10)]**

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
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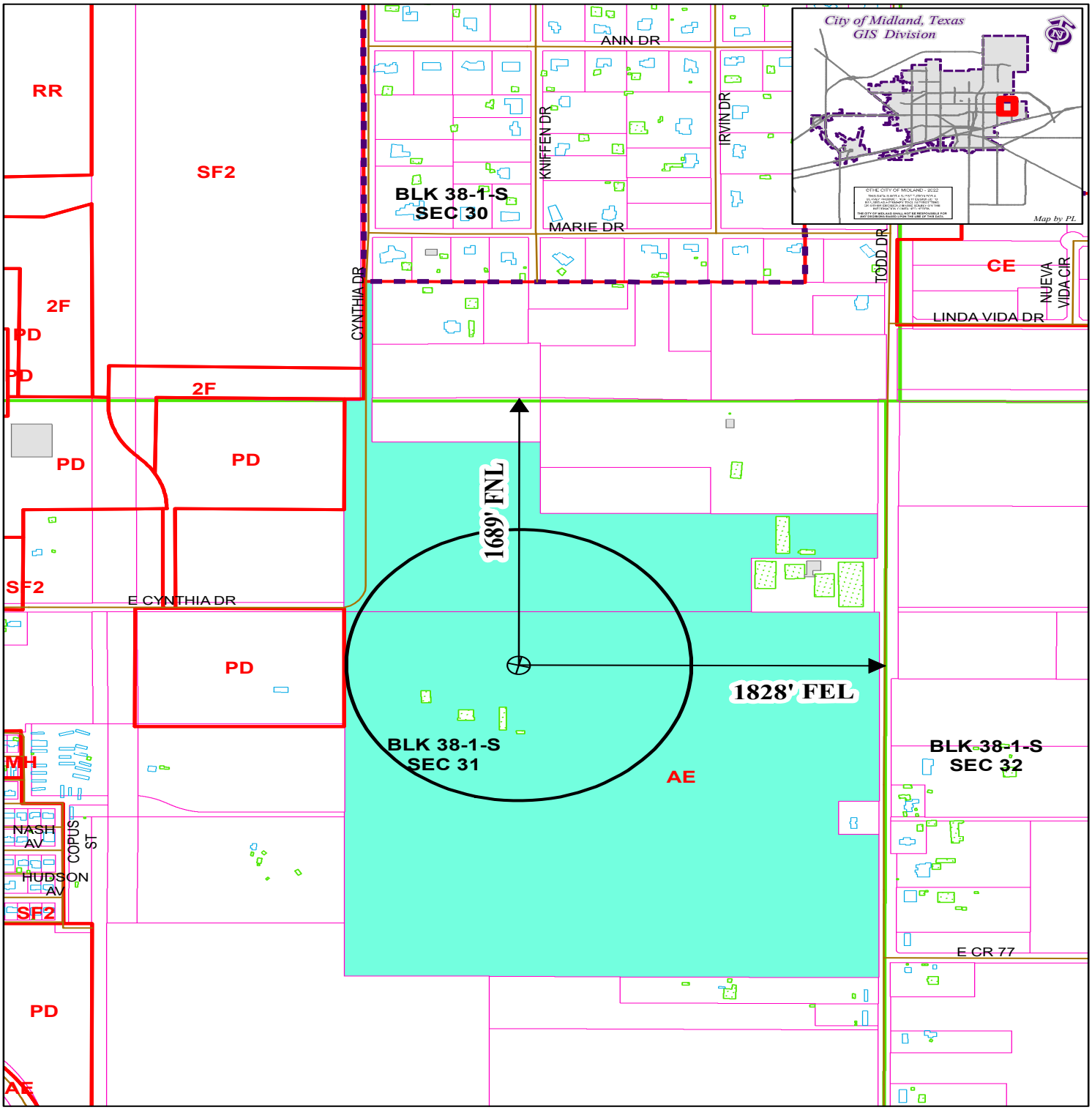
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ATTACHED AS EXHIBIT W **is Acoustic Impact Study/Mitigation Plan**



LOCATION AND ZONING MAP

Oil - 044232 - 2022 **Scale: 1" = 700'**

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Generally located 359 feet south of East Cynthia Drive extension and 1,828 feet west of Todd Drive.

Elkins Atrelle 31-42 #132

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

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PD	PLANNED DISTRICT	P	PARKING
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2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
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MIDLAND
Planning Division

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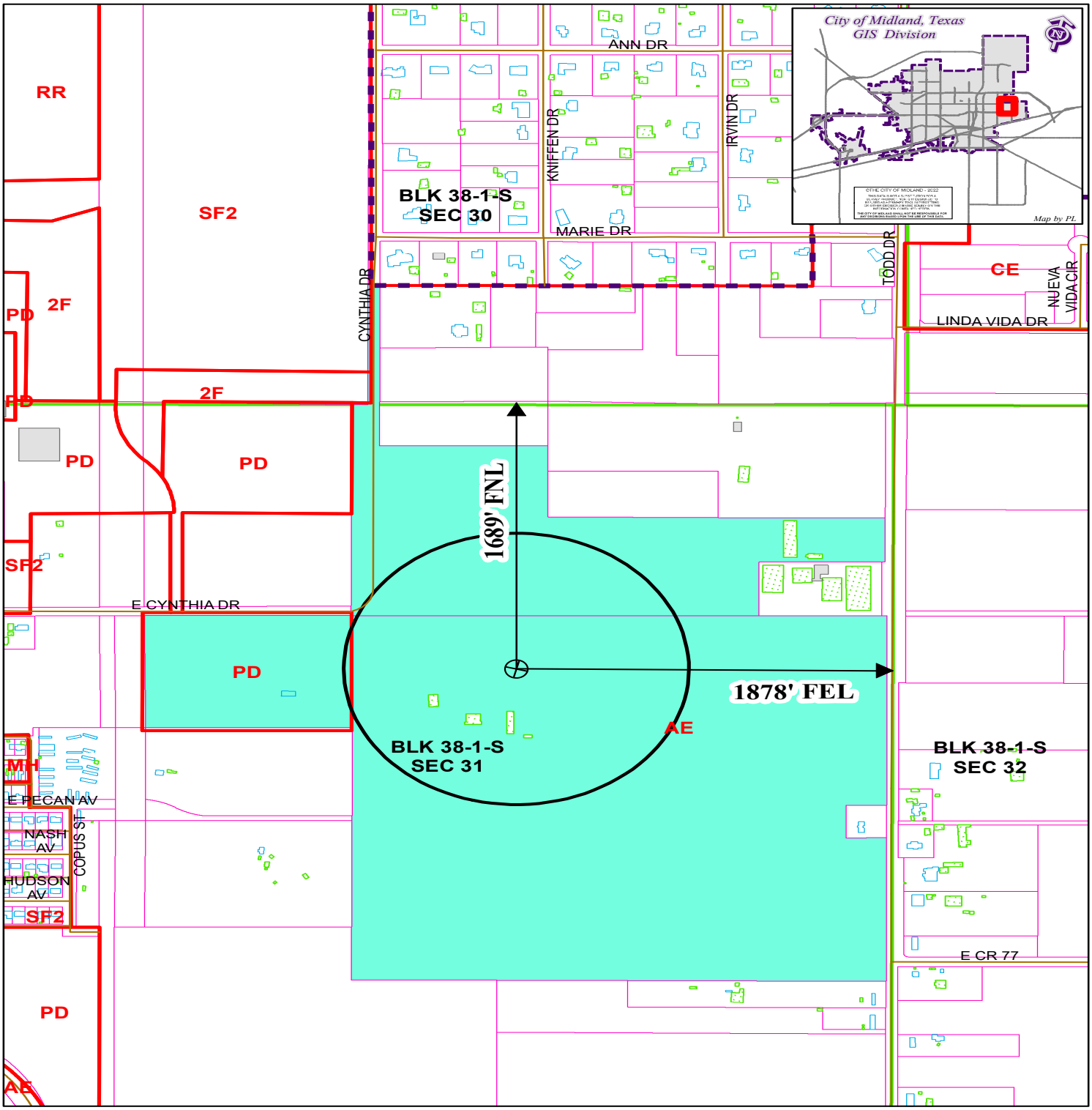
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Elkins Atrelle 31-42 #133

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MIDLAND
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Option B: Ryan Burrow
1700 FM 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Ryan Burrow, Production Foreman for Endeavor Energy Resources, L.P.: Cell: 432-813-3060
Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C **–** is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application**. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Pasture

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

***ATTACHED AS EXHIBIT E* is a *(map/plat/satellite/aerial photo)* depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Elkins Atrelle 31-42 #143

***ATTACHED AS EXHIBIT G is* Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
***ATTACHED AS EXHIBIT G is* 24 Hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1689' FNL 1903' FEL, Section 31, Block 38, T-1-S, T&P RR Co Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Plat and Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K* is the location agreement letter with current Surface Owner. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M* is the Road Repair Agreement and *Letter of Credit/Certificate of Deposit/Surety Bond* in the amount of at least $75,000. *Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):* Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000 *letter of credit/certificate of deposit/surety bond* in conjunction with this request. [See § J(31)].**

***ATTACHED AS EXHIBIT N* is the written Concept Plan, Tank battery schematic and Site Plan. [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: Electricity TXU: 1-800-233-2133

(2) Operations: Electricity TXU: 1-800-233-2133

Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. If producing water from the Santa Rosa Aquifer is uneconomical; the Operator will use existing or new shallow wells within the 140 acre site to supplement supply. If the Operator is unable to develop and maintain an adequate supply from the water wells on site; fresh water shall be transported by truck or pipeline from a pre-arranged source to the fresh water pond located on the site.

Description of all electric lines to production facilities (reference exhibits as necessary)
***ATTACHED AS EXHIBIT G.* [See § L(10)]**

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
***ATTACHED AS EXHIBIT O.* [See § J(35)]**

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the *Blanket Bond and Rider* in accordance with Subsection (K)(2). [See § J(18)].**

ATTACHED AS EXHIBIT Q **is an Affidavit indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].**

ATTACHED AS EXHIBIT R **is the required Insurance Certificate. [See § J(19) and § K(3)].**

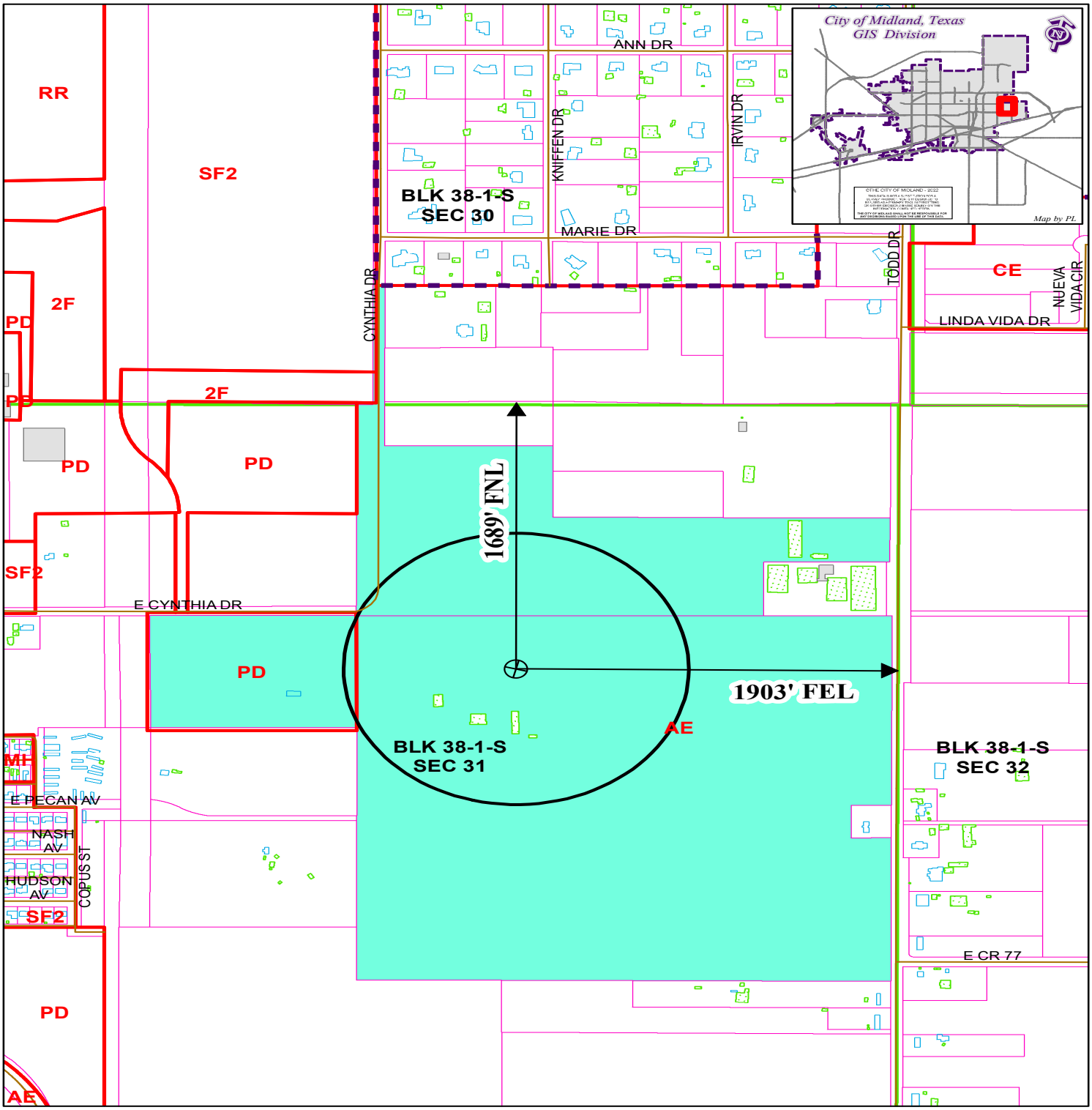
ATTACHED AS EXHIBIT S (if applicable) **is the Drainage Plan approved by the City Engineer relating to Applicant's proposed operations. [See § J(21)].**

ATTACHED AS EXHIBIT T **is Applicant's Emergency Action Response Plan. [See § J(22)].**

ATTACHED AS EXHIBIT U **is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V **is Summary List of Variances**

ATTACHED AS EXHIBIT W **is Acoustic Impact Study/Mitigation Plan**



LOCATION AND ZONING MAP

Oil - 044234 - 2022 **Scale: 1" = 700'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,689' FNL and 1,903' FEL, Section 31, Block 38, T-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 359 feet south of East Cynthia Drive extension and 1,903 feet west of Todd Drive.

Elkins Atrelle 31-42 #143

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

MIDLAND
Planning Division

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
May 27, 2022	Endeavor Energy Resources, L.P.	110 N. Marienfeld, Suite 200 Midland, TX 79701

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele. (432)-556-0588
Alex Bedford, Reservoir Engineer	110 N. Marienfeld, Suite 200 Midland, TX 79701	**Rep. Fax** (432)-682-3088
Fee: $4,000.00 Rec'd Yes X No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1): Option B

Option B: Ryan Burrow
1700 FM 115
Midland, Texas 79706
Office: (432) 262-4271
Cell: (432) 813-3060

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):***

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):
Ryan Burrow, Production Foreman for Endeavor Energy Resources, L.P.: Cell: 432-813-3060
Endeavor Energy Resources, L.P. -**24-Hour Emergency Hotline- 432-570-0186**
Midland Police Department: 911 or 432-685-7110
Midland Fire Department: 911
Ambulance: 911
Paramedics: 911

Other Permitted Wells in City ***(ATTACHED AS EXHIBIT B*** **[see § J(26)]).**

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease): ***ATTACHED AS EXHIBIT C***

ATTACHED AS EXHIBIT C **–** is a letter from a licensed Texas Attorney indicating that the Operator has the legal right to develop the mineral estate that is the subject to this application**. [See § J(5)].**

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Open Pasture

ATTACHED AS EXHIBIT D **are the most** ***Current Tax Cards from Midland Central Appraisal District,*** **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

ATTACHED AS EXHIBIT E **is a** ***(map/plat/satellite/aerial photo)*** **depicting all residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The** ***(map/p lat/satellite/aerial photo)*** **includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

ATTACHED AS EXHIBIT F **is a copy of the notification letter(s) sent to one hundred (100%) percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Elkins Atrelle 31-42 #231

ATTACHED AS EXHIBIT G is **Proposed Hole Size, Casing Program and Cementing Program [See § J(11) and § L(4)]:**
ATTACHED AS EXHIBIT G is **24 Hour Fracing Operations Variance**

Legal Description of Proposed Well Site:

Surface Hole Location: 1689' FNL 1853' FEL, Section 31, Block 38, T-1-S, T&P RR Co Survey, Midland County, Texas

ATTACHED AS EXHIBIT G **is the Plat and Location Site Plan [See § J(9)].**

ATTACHED AS EXHIBIT H **is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

ATTACHED AS EXHIBIT I **is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments** ***(also file copy of W-1 with City Secretary before commencement of drilling operations).*** **[See § J(16) and (20)].**

ATTACHED AS EXHIBIT J **is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

ATTACHED AS EXHIBIT K **is the location agreement letter with current Surface Owner. [See § J(27)].**

ATTACHED AS EXHIBIT L **is the Fencing and Irrigation Plan. [See § J(30)].**

ATTACHED AS EXHIBIT M **is the Road Repair Agreement and** ***Letter of Credit/Certificate of Deposit/Surety Bond*** **in the amount of at least $75,000.** ***Option (if applicable): Applicant would further state that no City-owned streets or alleys will be used by the Operator in connection with its oil and gas operations and as a result, requests a waiver from the Council of this requirement. Option B (if applicable):*** **Because Applicant has three Road Repair Agreements in effect that have been approved by the Council, Applicant requests that the Council consolidate all agreements into one and is filing the necessary $75,000** ***letter of credit/certificate of deposit/surety bond*** **in conjunction with this request. [See § J(31)].**

ATTACHED AS EXHIBIT N **is the written Concept Plan, Tank battery schematic and Site Plan. [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) **Drilling:** Electricity TXU: 1-800-233-2133

(2) **Operations:** Electricity TXU: 1-800-233-2133

Description of water source to be used during Drilling: Operator will attempt to use water from the Santa Rosa Aquifer for most all drilling and completion purposes. If producing water from the Santa Rosa Aquifer is uneconomical; the Operator will use existing or new shallow wells within the 140 acre site to supplement supply. If the Operator is unable to develop and maintain an adequate supply from the water wells on site; fresh water shall be transported by truck or pipeline from a pre-arranged source to the fresh water pond located on the site.

Description of all electric lines to production facilities (reference exhibits as necessary)
ATTACHED AS EXHIBIT G. **[See § L(10)]**

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary)
ATTACHED AS EXHIBIT O. **[See § J(35)]**

V. Additional Required Exhibits

ATTACHED AS EXHIBIT P **is the *Blanket Bond and Rider* in accordance with Subsection (K)(2). [See § J(18)].**

ATTACHED AS EXHIBIT Q **is an Affidavit indicating that all taxes on personal and real property, including minerals, owned by Applicant are current. [See § J(29)].**

ATTACHED AS EXHIBIT R **is the required Insurance Certificate. [See § J(19) and § K(3)].**

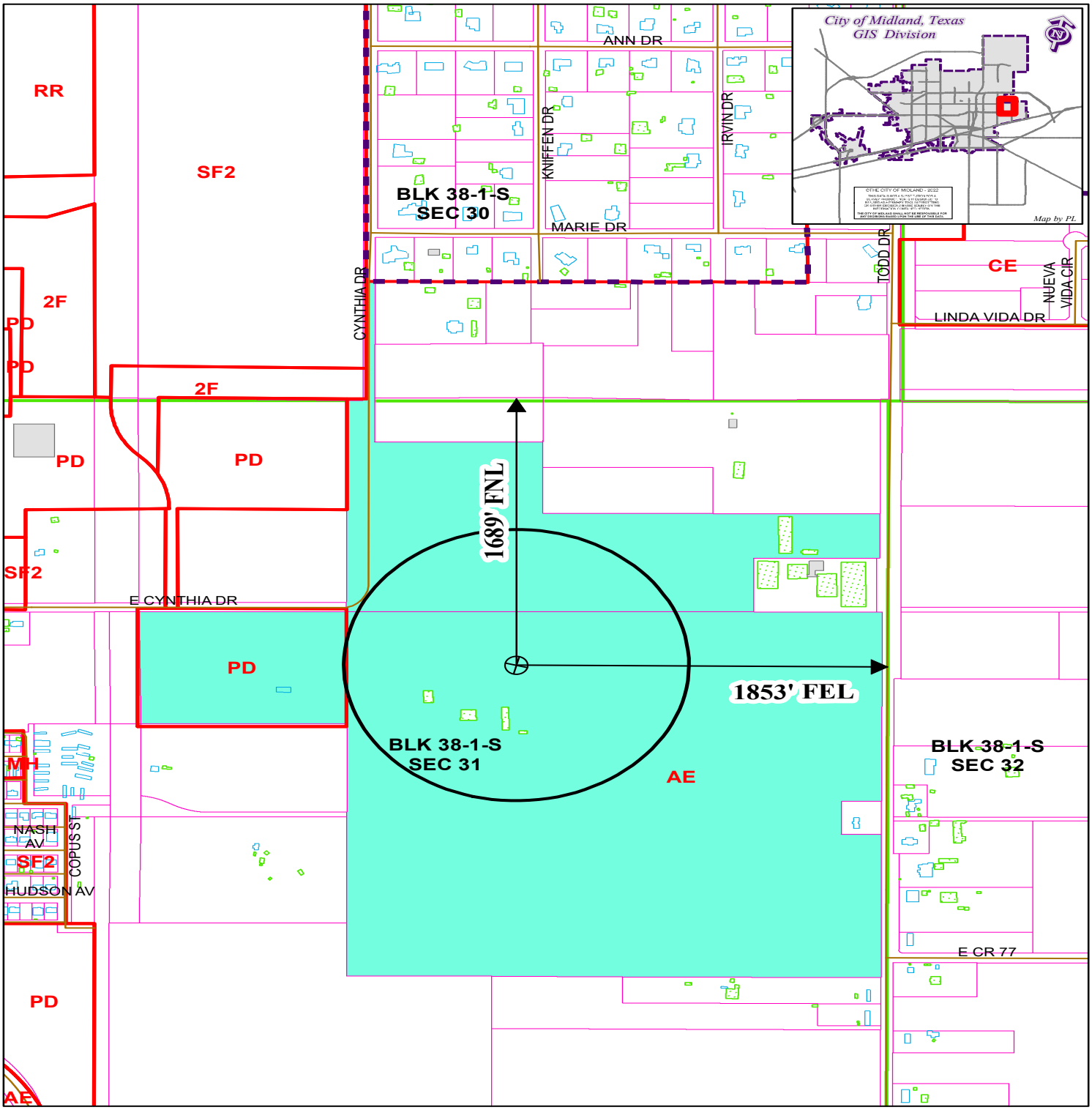
ATTACHED AS EXHIBIT S (if applicable) **is the Drainage Plan approved by the City Engineer relating to Applicant's proposed operations. [See § J(21)].**

ATTACHED AS EXHIBIT T **is Applicant's Emergency Action Response Plan. [See § J(22)].**

ATTACHED AS EXHIBIT U **is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V **is Summary List of Variances**

ATTACHED AS EXHIBIT W **is Acoustic Impact Study/Mitigation Plan**



LOCATION AND ZONING MAP

Oil - 044236 - 2022 **Scale: 1" = 700'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 1,689' FNL and 1,853' FEL, Section 31, Block 38, T-1-S, T&P RR CO Survey, Midland County, Texas.

Generally located 359 feet south of East Cynthia Drive extension and 1,853 feet west of Todd Drive.

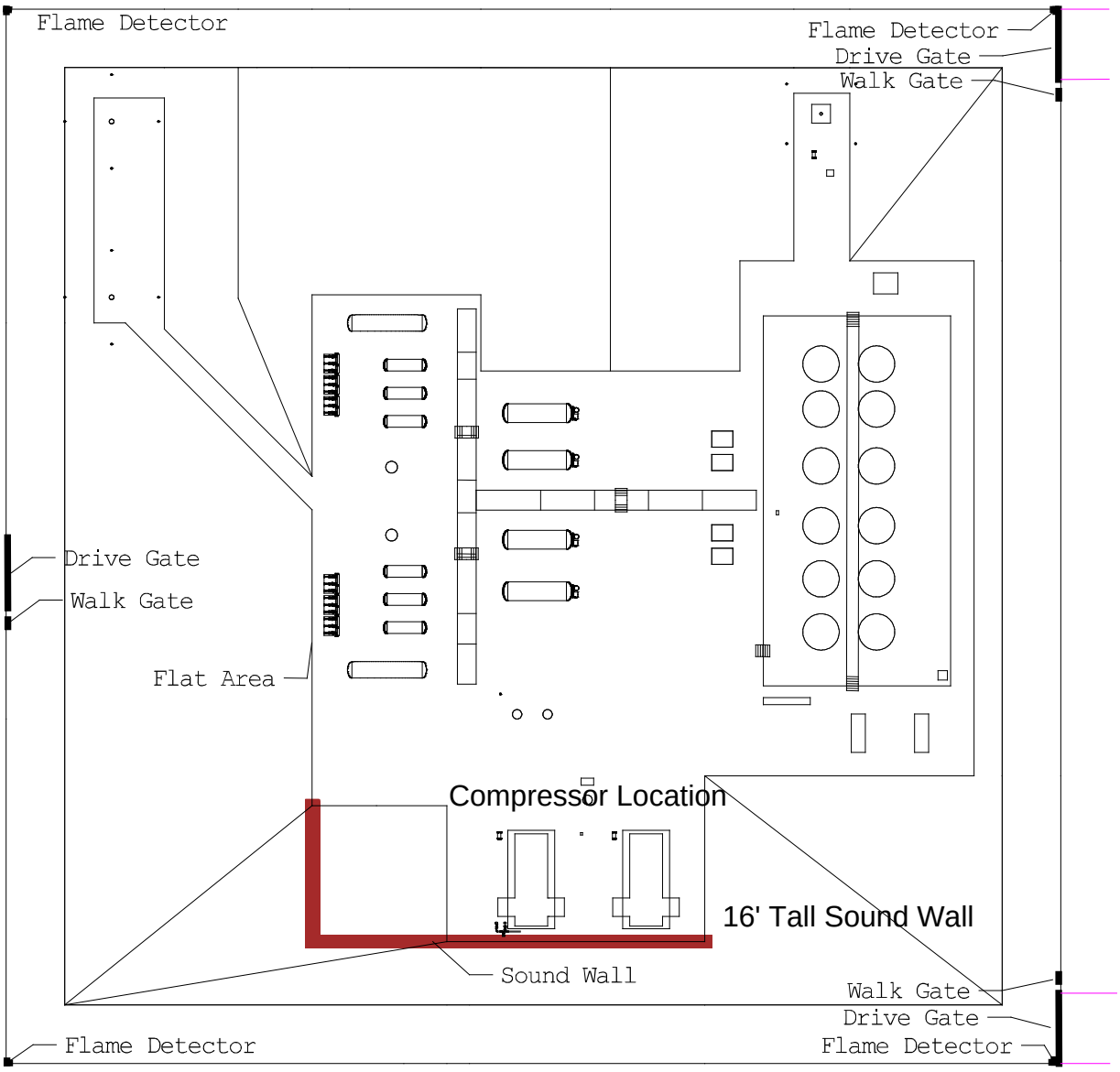
Elkins Atrelle 31-42 #231

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY


Flame Detector
Flame Detector
Drive Gate
Walk Gate
Drive Gate
Walk Gate
Flat Area
Compressor Location
16' Tall Sound Wall
Sound Wall
Walk Gate
Drive Gate
Flame Detector
Flame Detector
50 ft

City Council Meeting

Item Number: 21

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: **The proposed granting of oil and gas well permits to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the following oil and gas wells: Mustang 120 MIPA Unit #H120MS; Mustang 130 MIPA Unit #H130SS; and Mustang 140 MIPA Unit #H140MS; said wells being generally located between 1,575 feet and 1,697 feet east of Rankin Highway and between 500 feet and 590 feet south of I-20 (District 2) (Development Services)**

Purpose:

The proposed granting of oil and gas well permits to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the following oil and gas wells: Mustang 120 MIPA Unit #H120MS; Mustang 130 MIPA Unit #H130SS; and Mustang 140 MIPA Unit #H140MS; said wells being generally located between 1,575 feet and 1,697 feet east of Rankin Highway and between 500 feet and 590 feet south of I-20. Council may consider these permits following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibit. A 16 ft. sound wall will be used during drilling and completion operations being located on the north side of location. Tank battery is in the county. There

have been previous permitted applications near this well pad requiring the same variances. The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

.
(1) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.
(2) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well
(3) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation due to no city water is available.
(4) Permian Deep Rock Oil Company requests variance to the Road Repair Agreement due to no city streets will be used.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris William Jr.

City Manager's Office

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
06/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Surface use: Undeveloped Rangeland, hotels, service company yards
Surface ownership: Hotels and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Mustang 120 MIPA Unit #H120MS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 220' FNL & 1697' FWL, Section 11
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

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***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Company
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

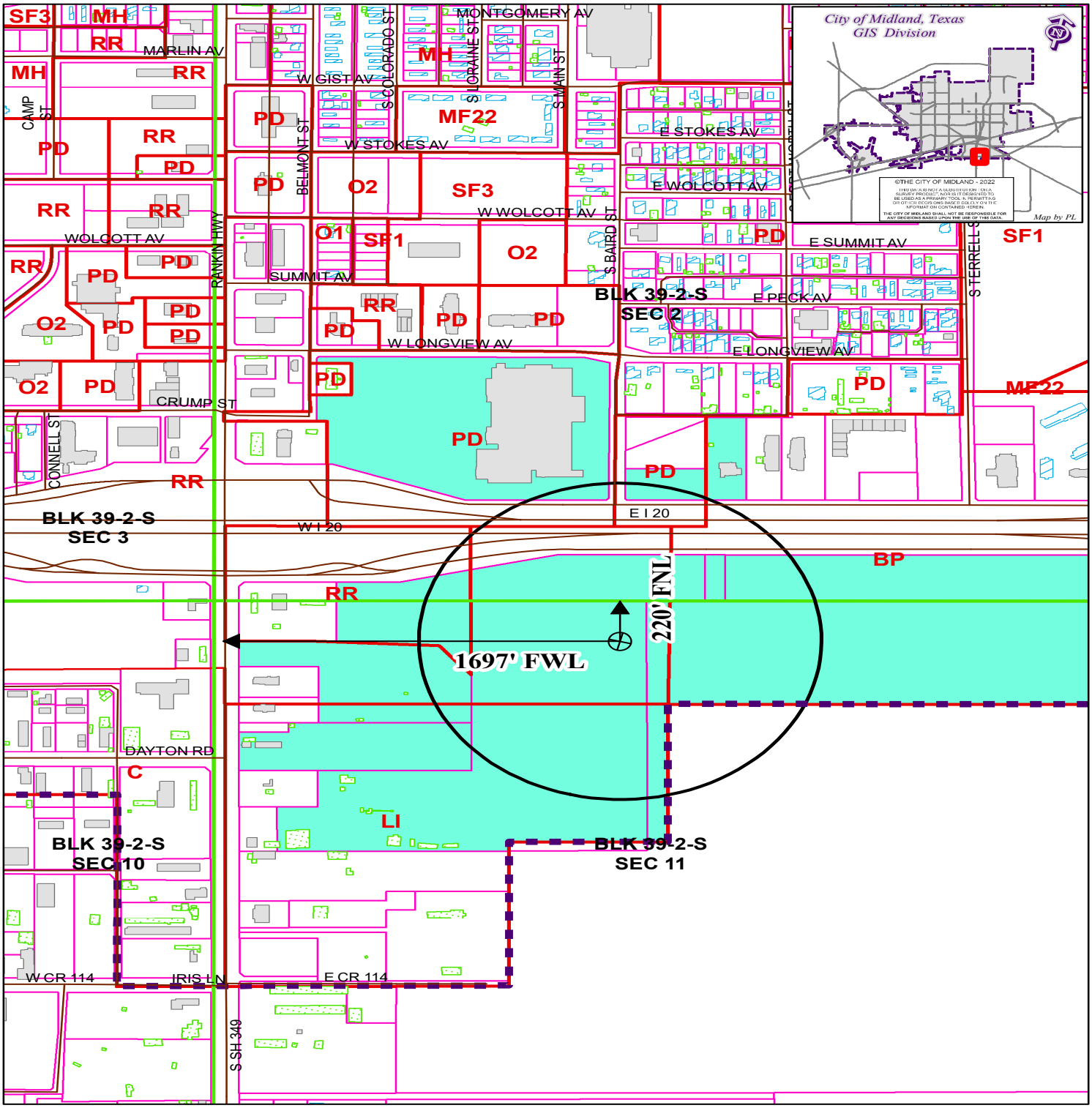
County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Pena
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8



LOCATION AND ZONING MAP

Oil - 044243 - 2022 **Scale: 1" = 600'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 220' FNL and 1,697' FWL, Section 11, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,697 feet east of Rankin Highway and 500 feet south of I-20.

Mustang 120 MIPA Unit #H120MS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
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TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

SCALE: 1" = 300'

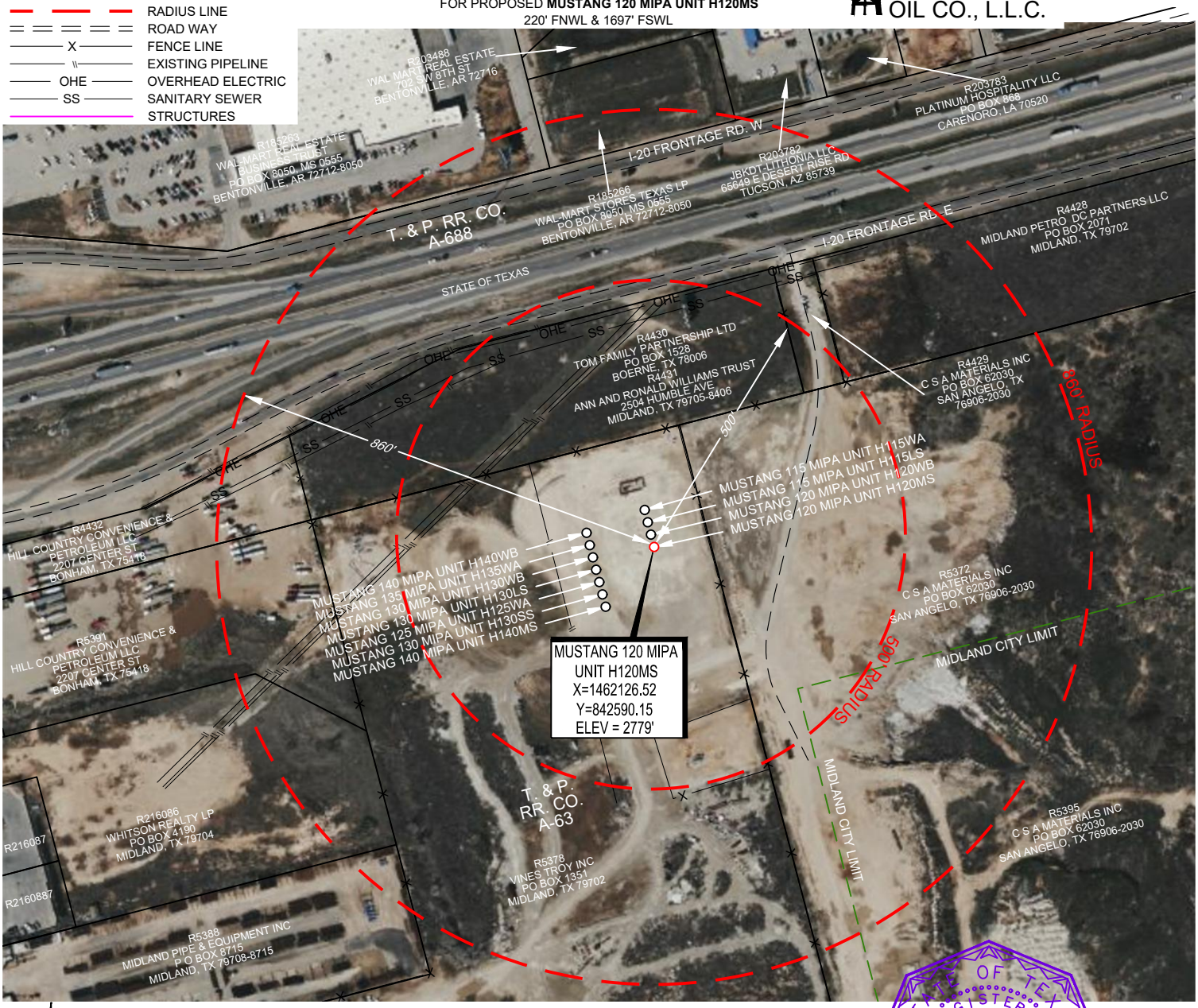
0' 150' 300'

LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- SANITARY SEWER
- STRUCTURES

SECTION 11, BLOCK 39, T-2-S
T. & P. RR. CO. SURVEY, A-63
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS
SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **MUSTANG 120 MIPA UNIT H120MS**
220' FNWL & 1697' FSWL

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
DECEMBER 2, 2021

MUSTANG 120 MIPA UNIT H120MS	REVISION:	
	INT	DATE
	DRH	05/19/2022
DATE: 05/17/2022		
FILE: CD_MUSTANG_120MS_REV1		
DRAWN BY: DRH		
SHEET : 1 OF 2		

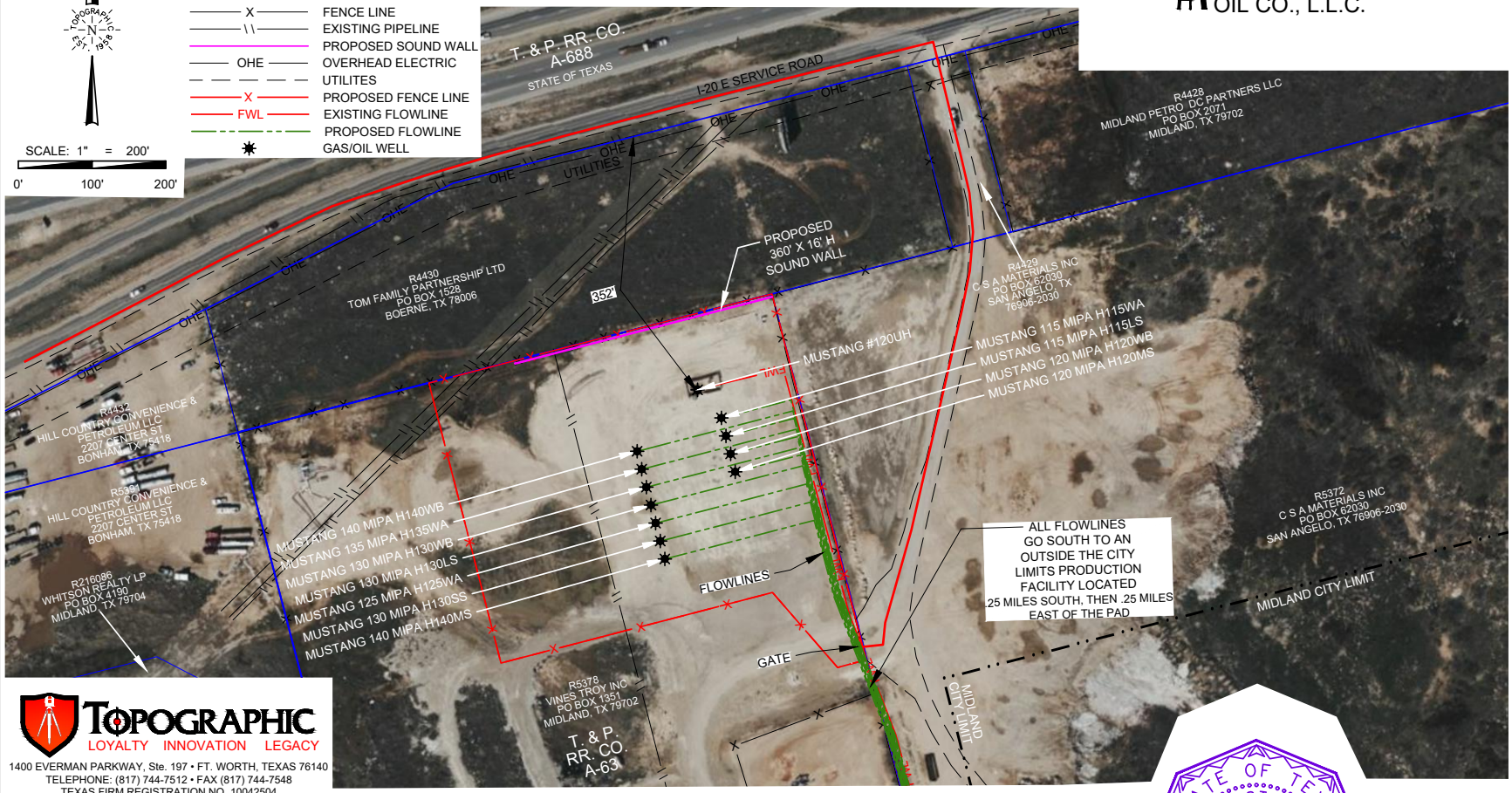
NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
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3. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
4. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

PACKET 21.8 August 9, 2022

EXHIBIT "G"

SECTION 11, BLOCK 39, T2S, T. & P. R. R. CO. SURVEY, A-63
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

MUSTANG EAST PAD CITY PERMIT	REVISION:	
	AMD	1/19/2018
	AMD	1/30/2018
	DRH	7/13/2021
DATE: 01/08/2018	DRH	7/14/2021
FILE: SK_MUSTANG_H120UH_CL_PERMIT_REV8	DRH	8/12/2021
DRAWN BY: AMD	DRH	4/11/2022
SHEET : 3 OF 7	DRH	5/2/2022

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS COORDINATE SYSTEM OF 1927, CENTRAL ZONE, U.S. SURVEY FEET.
3. CERTIFICATION IS MADE ONLY FOR PROPOSED UTILITIES AND SITES, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY PERMIAN DEEP ROCK OIL CO., L.L.C. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. ALL PROPOSED INFRASTRUCTURE SHOWN HEREON IS SOLELY FOR THE PURPOSE OF APPLYING FOR A PERMIT WITH THE CITY OF MIDLAND, TEXAS. THIS IS EXHIBIT IS NOT TO BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH THE T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THESE ARE FOR PLANNING PURPOSES ONLY.
5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

STATE OF TEXAS REGISTERED JEFFREY N. LUEDERS 6512 LICENSED PROFESSIONAL LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: JUNE 11, 2021

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\SKETCH\SK_MUSTANG_H120UH_CL_PERMIT_REV8.DWG 5/2/2022 8:23:07 AM dharris

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
06/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Surface use: Undeveloped Rangeland, hotels, service company yards
Surface ownership: Hotels and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Mustang 130 MIPA Unit #H130SS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 285' FNL & 1575' FWL, Section 11
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Company
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

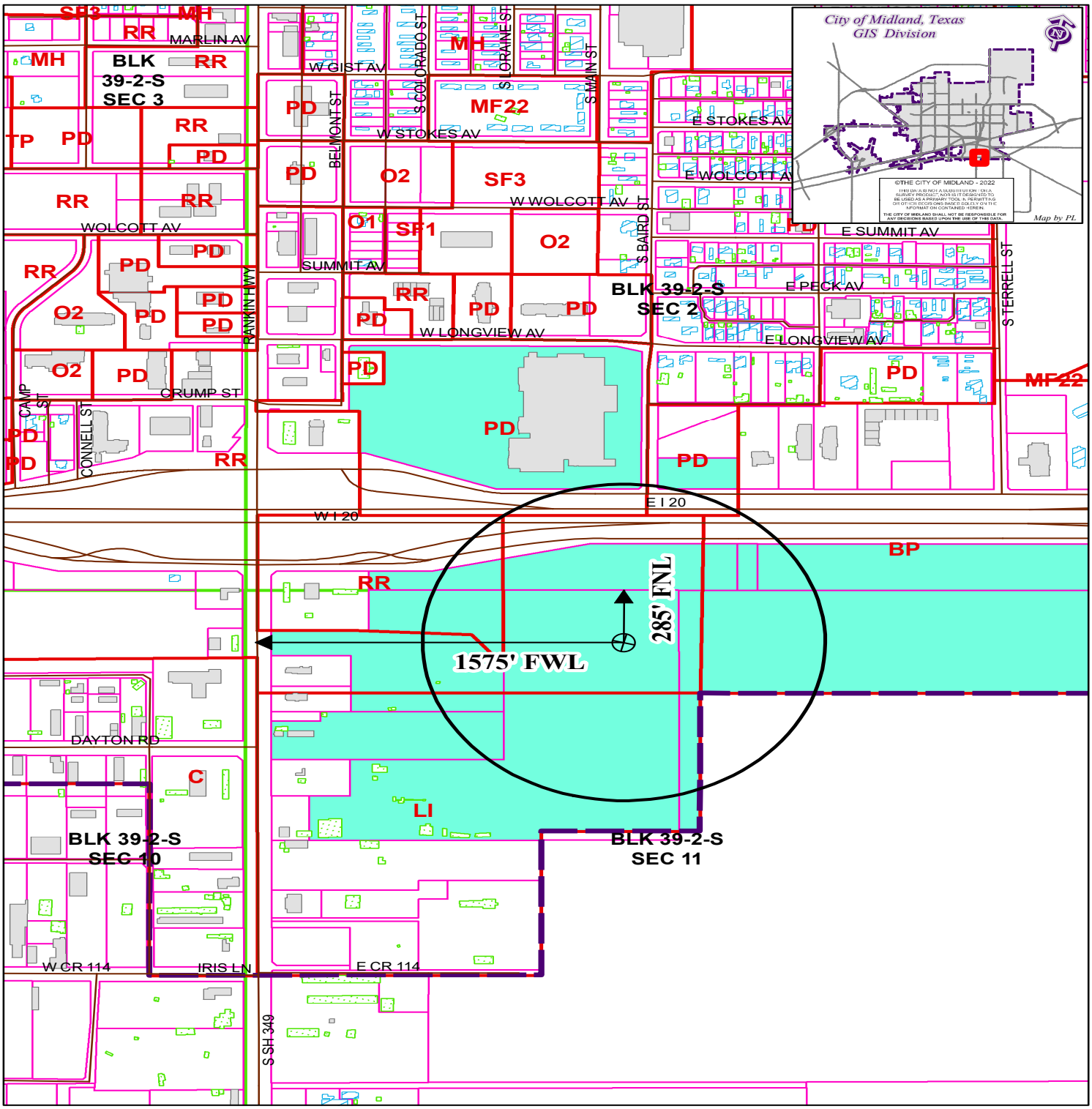
County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Pena
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8



LOCATION AND ZONING MAP

Oil - 044246 - 2022 **Scale: 1" = 600'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 285' FNL and 1,575' FWL, Section 11, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,575 feet east of Rankin Highway and 360 feet south of I-20.

Mustang 130 MIPA Unit #H130SS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

SCALE: 1" = 300'

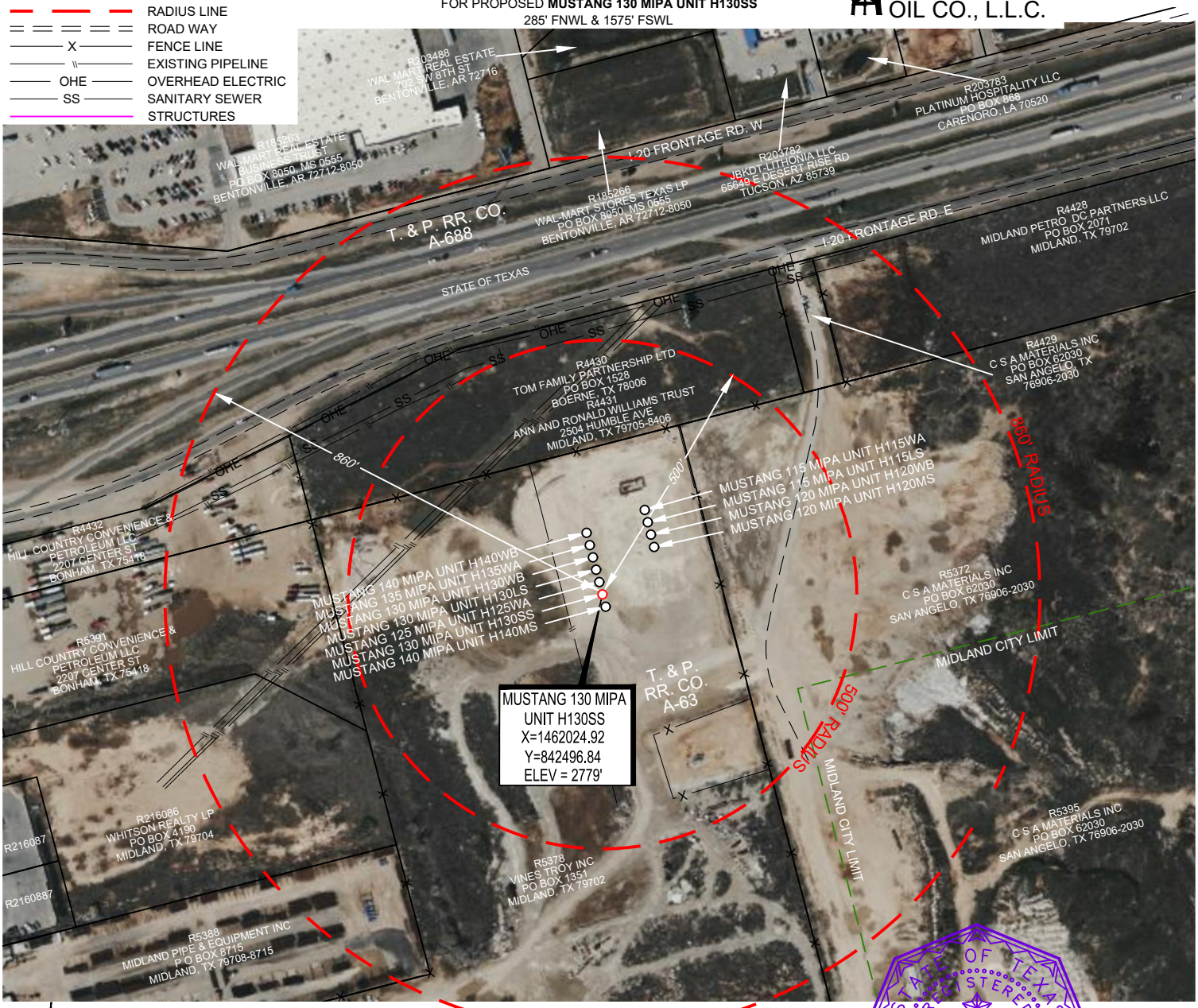
0' 150' 300'

LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- SANITARY SEWER
- STRUCTURES

SECTION 11, BLOCK 39, T-2-S
T. & P. RR. CO. SURVEY, A-63
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS
SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **MUSTANG 130 MIPA UNIT H130SS**
285' FNWL & 1575' FSWL

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

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LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
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STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
DECEMBER 2, 2021

MUSTANG 130 MIPA UNIT H130SS	REVISION: INT	DATE
	DRH	05/19/2022
DATE: 05/17/2022		
FILE: CD_MUSTANG_130SS_REV1		
DRAWN BY: DRH		
SHEET : 1 OF 2		

NOTES:
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PACKET 21.15 August 9, 2022

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
06/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

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2.

3.

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Surface ownership: Hotels and service company yards:

See Exhibit "D"

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Current Tax Roll from Midland Central Appraisal District), **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Mustang 140 MIPA Unit #H140MS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 310' FNL & 1575' FWL, Section 11
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

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***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

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***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

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***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Company
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

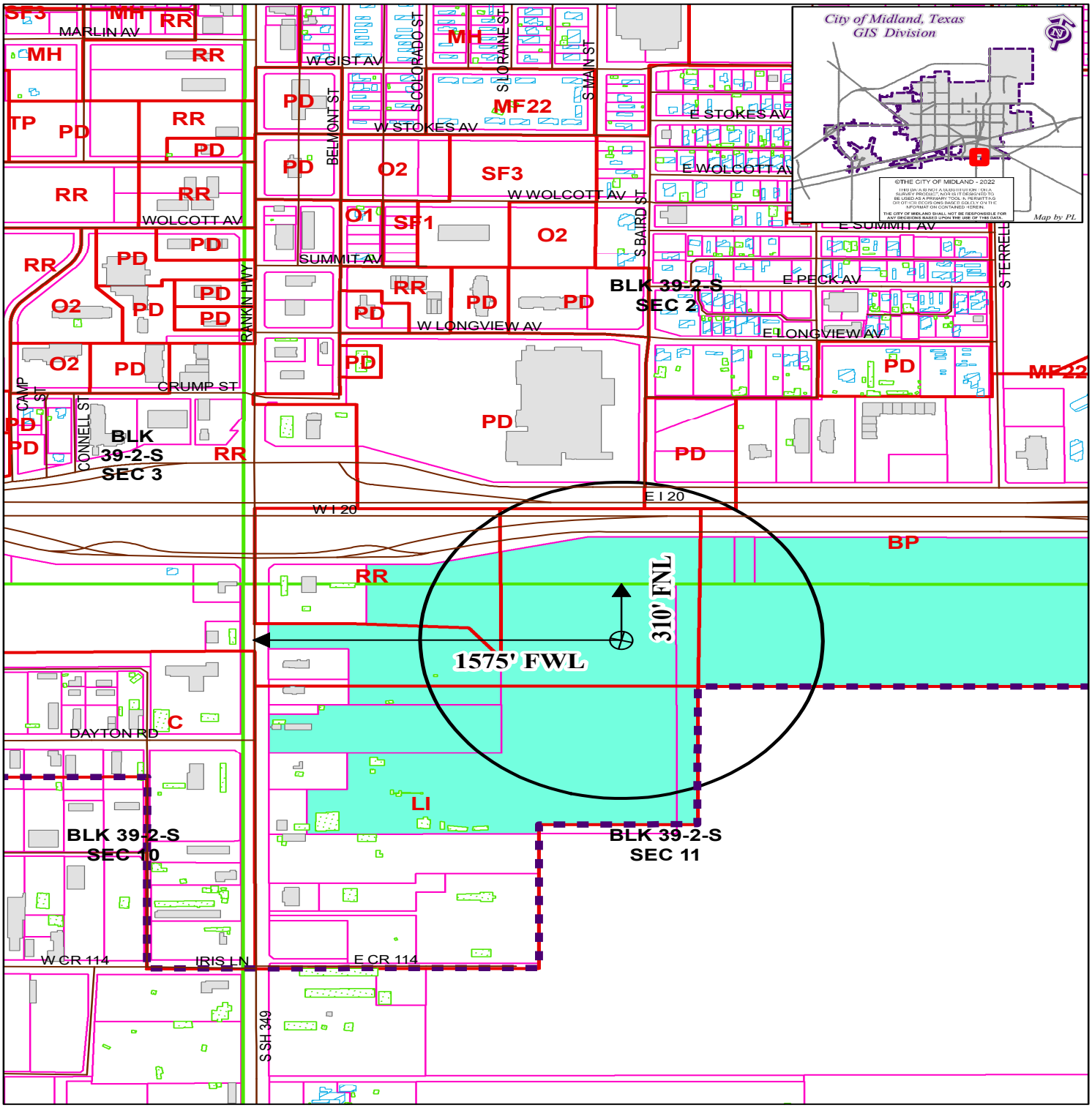
County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Pena
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8



LOCATION AND ZONING MAP

Oil - 044248 - 2022 **Scale: 1" = 600'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 310' FNL and 1,575' FWL, Section 11, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,575 feet east of Rankin Highway and 310 feet south of I-20.

Mustang 140 MIPA Unit #H140MS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

SCALE: 1" = 300'

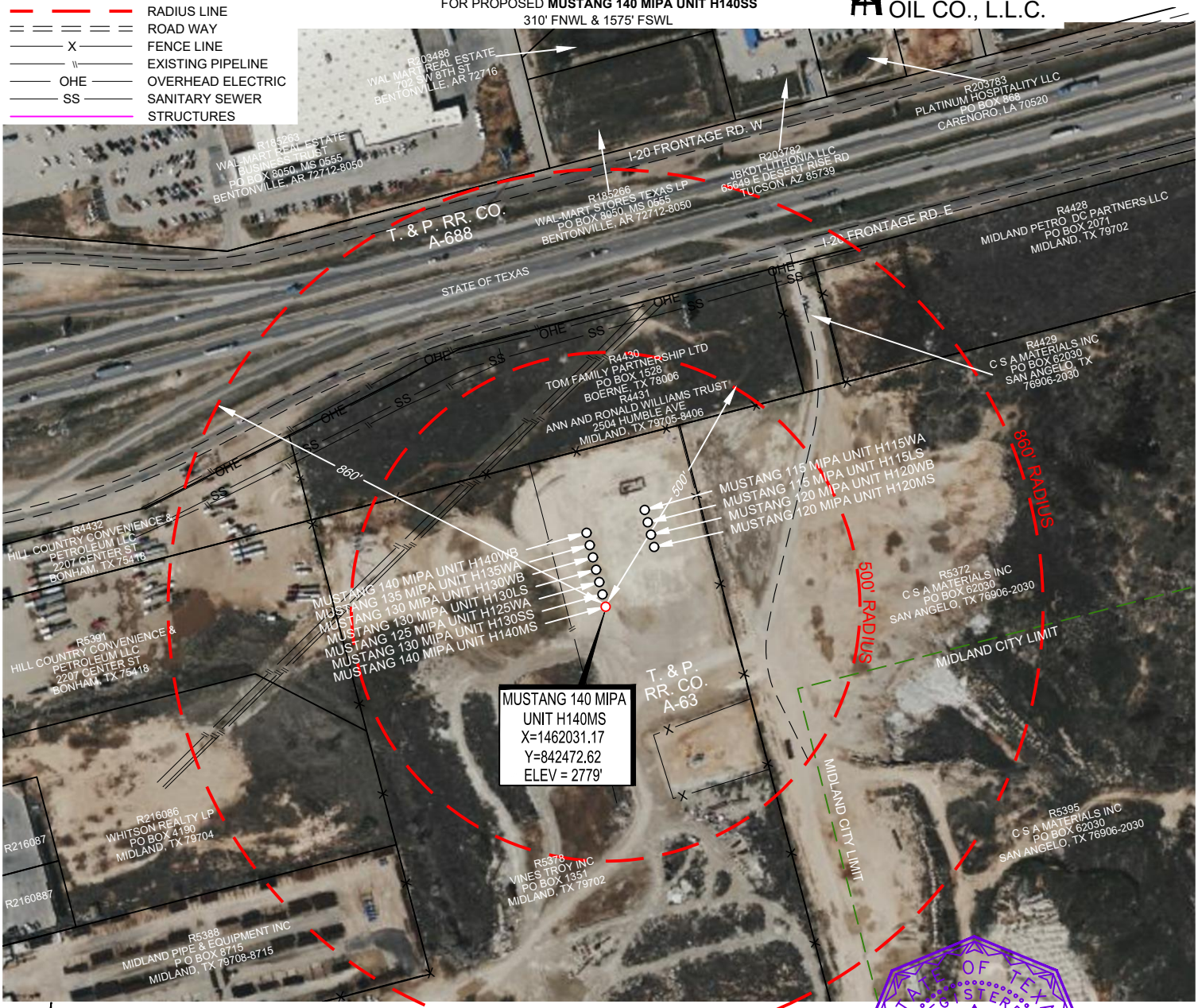
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LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- X FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- SS SANITARY SEWER
- STRUCTURES

SECTION 11, BLOCK 39, T-2-S
T. & P. RR. CO. SURVEY, A-63
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS
SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **MUSTANG 140 MIPA UNIT H140SS**
310' FNWL & 1575' FSWL

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

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STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
DECEMBER 2, 2021

MUSTANG 140 MIPA UNIT H140MS	REVISION:	
	INT	DATE
	DRH	05/19/2022
DATE: 05/17/2022		
FILE: CD_MUSTANG_140MS_REV1		
DRAWN BY: DRH		
SHEET : 1 OF 2		

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5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

PACKET 21.21 August 9, 2022

City Council Meeting

Item Number: 22

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: **The proposed granting of oil and gas well permits to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the following oil and gas wells: Mustang 150 MIPA Unit #H150SS and Mustang 160 MIPA Unit #H160MS; said wells being generally located between 952 feet and 1,121 feet west of Rankin Highway and between 433 feet and 460 feet south of I-20. (DISTRICT 2) (DEVELOPMENT SERVICES)**

Purpose:

The proposed granting of oil and gas well permits to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the following oil and gas wells: Mustang 150 MIPA Unit #H150SS and Mustang 160 MIPA Unit #H160MS; said wells being generally located between 952 feet and 1,121 feet west of Rankin Highway and between 433 feet and 460 feet south of I-20. Council may consider these permits following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibit. A 16 ft. sound wall will be used during drilling and fracing operations being located on the south side of location. Tank battery is in the city limits. There have been previous permitted applications near this well pad requiring the same variances. The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

.
(1) Permian Deep Rock Oil Company requests variance to residence or commercial structure:
Mustang 150 MIPA Unit #H150SS of 228 feet to occupied structure.
Mustang 160 MIPA Unit #H160MS of 325 feet to occupied structure.
(2) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.
(3) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well
(4) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation due to no city water is available.
(5) Permian Deep Rock Oil Company requests variance to the Road Repair Agreement due to no city streets will be used.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris Williams Jr.

City Manager's Office

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
06/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Surface use: Undeveloped Rangeland, hotels, service company yards
Surface ownership: Hotels and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Mustang 150 MIPA Unit #H150SS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 270' FNL & 952' FEL, Section 10
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Company
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

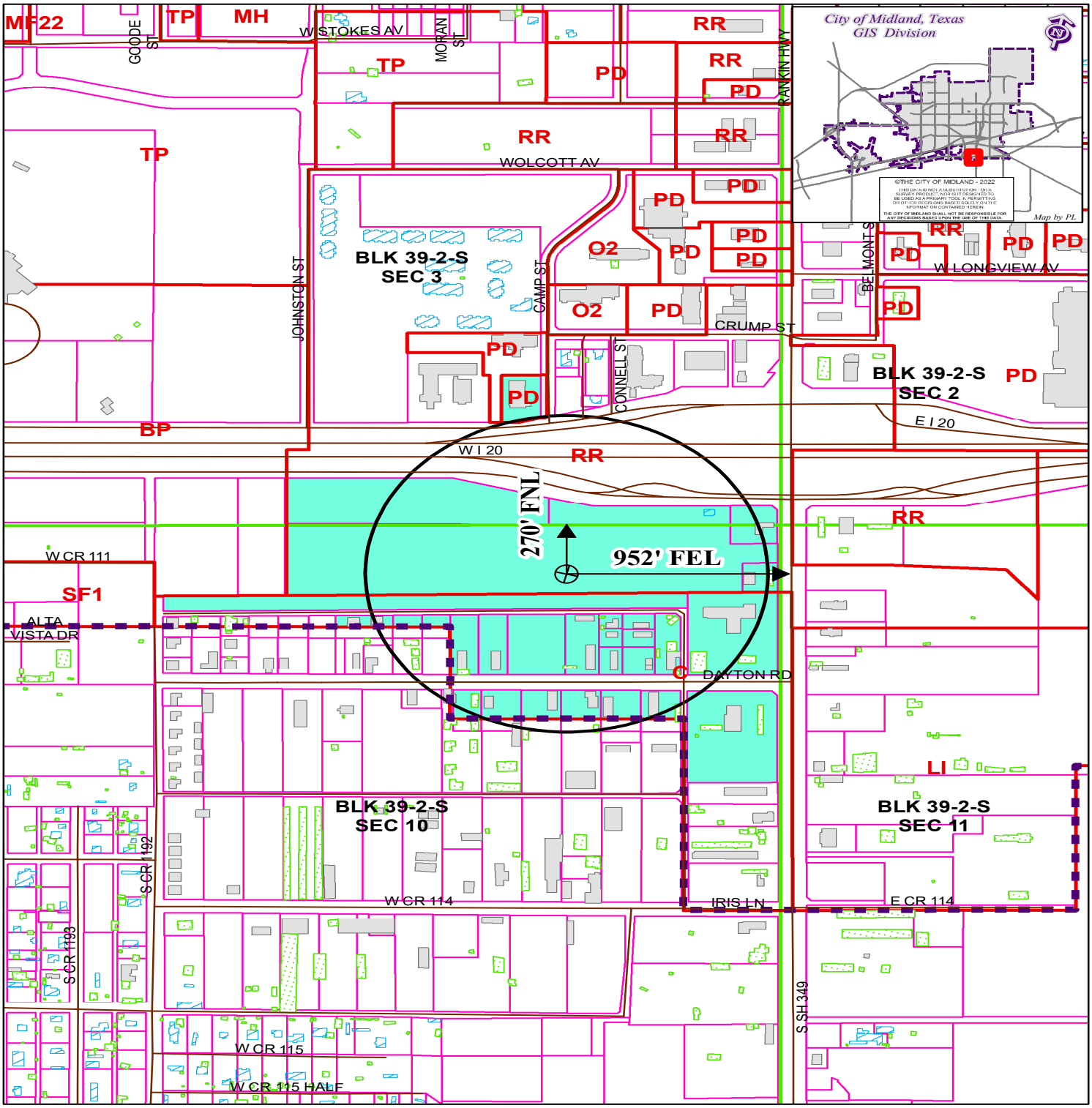
County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Pena
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8



LOCATION AND ZONING MAP

Oil - 044249 - 2022 **Scale: 1" = 600'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 270' FNL and 952' FEL, Section 10, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 952 feet west of Rankin Highway and 1460 feet south of I-20.

Mustang 150 MIPA Unit #H150SS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

SCALE: 1" = 300'

0' 150' 300'

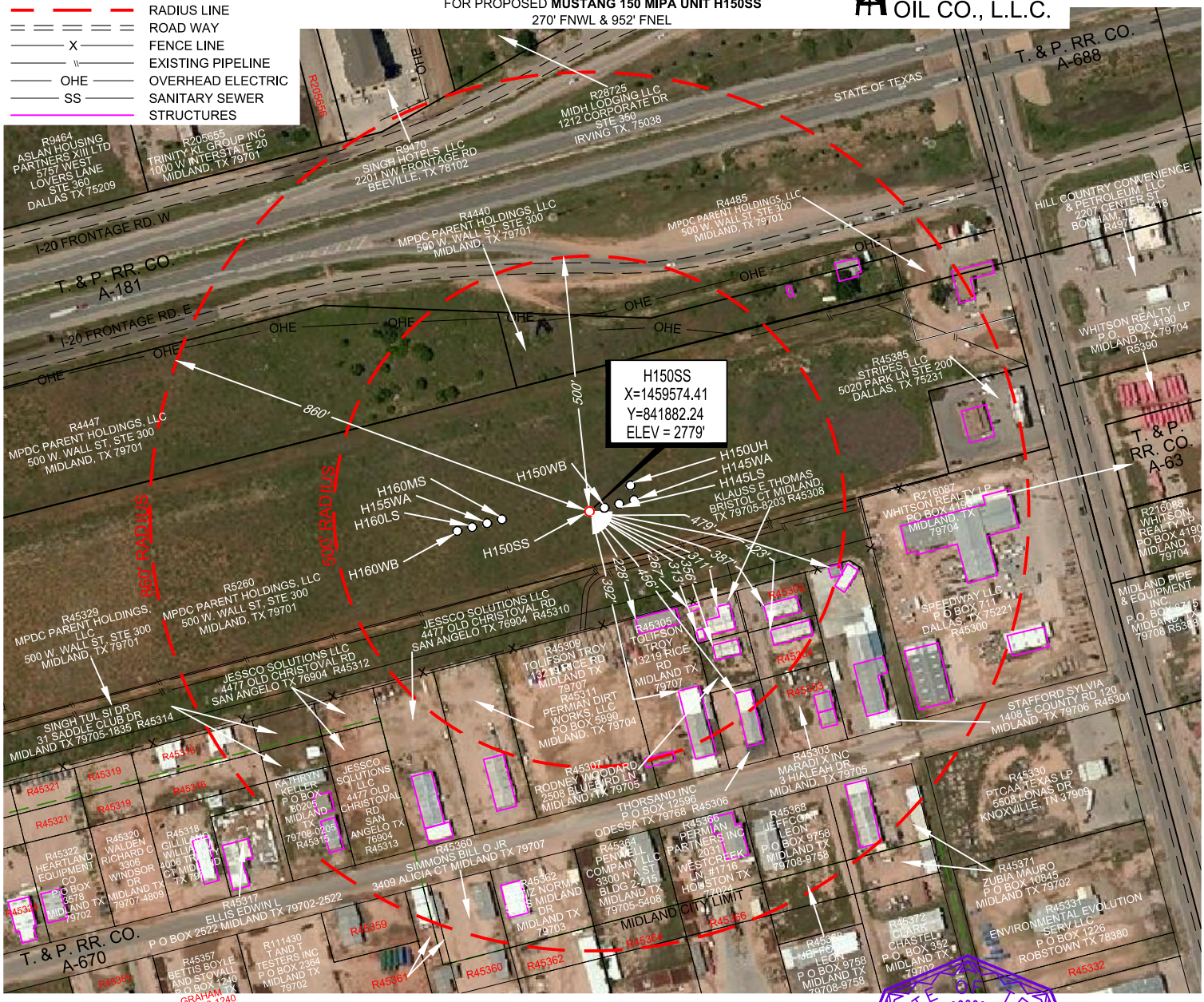
LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- X FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- SS SANITARY SEWER
- STRUCTURES

T. & P. RR. CO. SURVEY, A-670
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **MUSTANG 150 MIPA UNIT H150SS**
270' FNWL & 952' FNEL

PERMIAN DEEP ROCK OIL CO., L.L.C.





TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM



Jeffrey N. Lueders, R.P.L.S. No. 6512
JUNE 11, 2021

MUSTANG 150 MIPA UNIT H150SS	REVISION:	
	DRH	06/04/2021
	DRH	06/15/2021
DATE: 05/12/2021	DRH	05/17/2022
FILE: CD_MUSTANG_150SS_REV6	DRH	05/19/2022
DRAWN BY: DRH	DRH	05/25/2022
SHEET : 1 OF 2	DRH	05/26/2022

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS COORDINATE
3. SYSTEM OF 1927, U.S. SURVEY FEET.
4. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
5. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
6. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

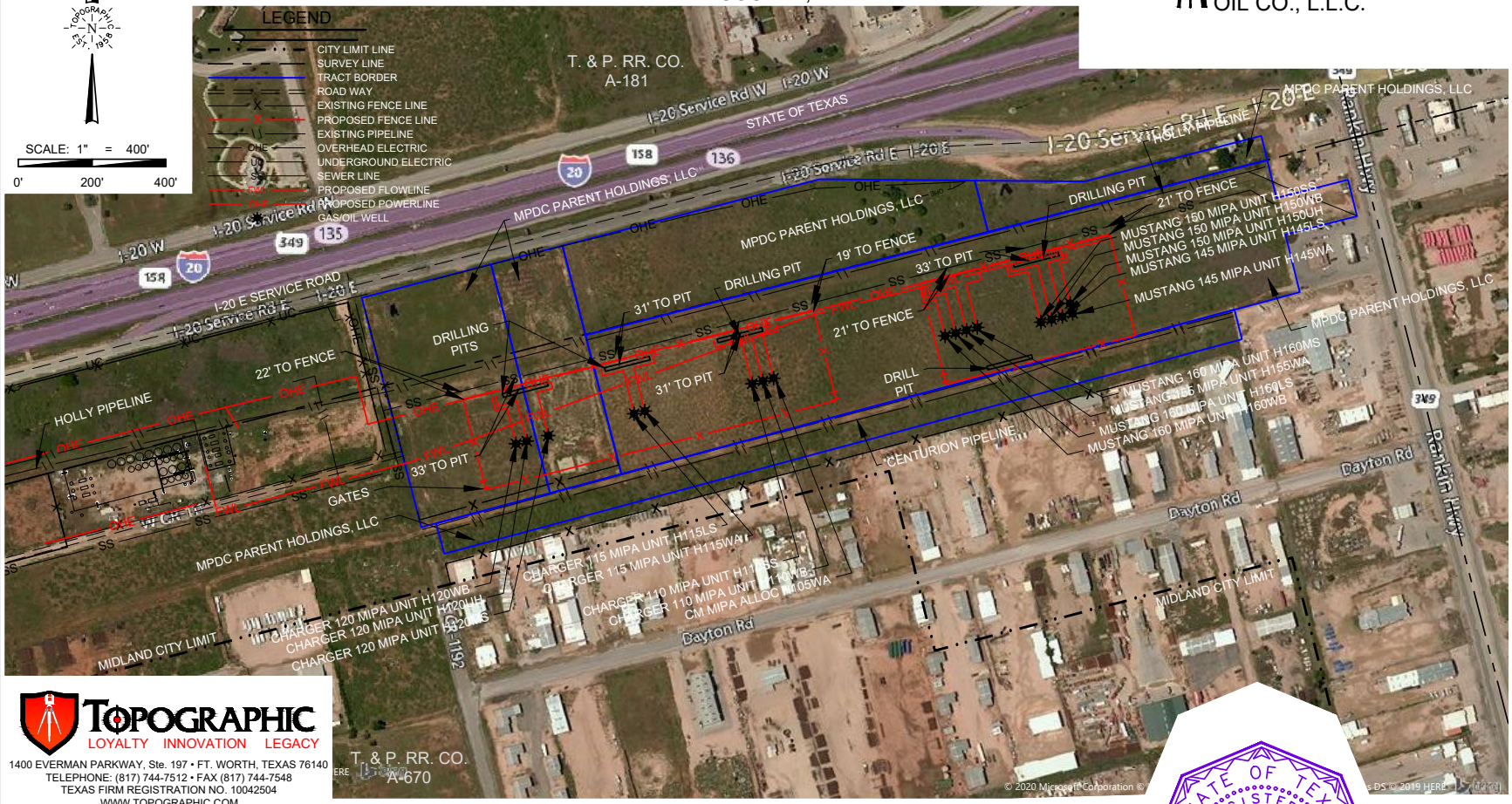
PACKET 22.8 August 9, 2022

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\CITY_PERMITS\NAD27\CD_MUSTANG_150SS_REV6.DWG 5/26/2022 2:08:43 PM dharris

EXHIBIT "G"

SECTION 3, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-181 &
SECTION 10, BLOCK 39, T2S, H. MCCLINTIC SURVEY, A-670
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

CHARGER UNIT CITY PERMIT		REVISION:	
		DRH	06/04/21
		DRH	06/15/21
		DRH	06/16/21
DATE:	03/28/2018	DRH	07/21/21
FILE:	SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV19	DRH	08/09/21
DRAWN BY:	GJU	DRH	10/13/21
SHEET :	3 OF 12	DRH	12/10/21

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY FOR PROPOSED UTILITIES AND SITES, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY PERMIAN DEEP ROCK OIL CO., L.L.C. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. ALL PROPOSED INFRASTRUCTURE SHOWN HEREON IS SOLELY FOR THE PURPOSE OF APPLYING FOR A PERMIT WITH THE CITY OF MIDLAND, TEXAS. THIS IS EXHIBIT IS NOT TO BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH THE T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THESE ARE FOR PLANNING PURPOSES ONLY.
5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.
6. D.R.M.C.T. = DEED RECORDS MIDLAND COUNTY, TEXAS
7. C.C.O.R.M.C.T. = C. C. OFFICIAL RECORDS MIDLAND COUNTY, TEXAS

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: JUNE 11, 2021

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\SKETCH\SK_MUSTANG_UNIT_A_CHARGER_UNIT_A_PERMIT_REV19.DWG 12/10/2021 10:42:30 AM dharris

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
06/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location): Surface use: Undeveloped Rangeland, hotels, service company yards
Surface ownership: Hotels and service company yards:

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].**

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Mustang 160 MIPA Unit #H160MS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 243' FNL & 1121' FEL, Section 10
Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

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***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

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***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Company
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

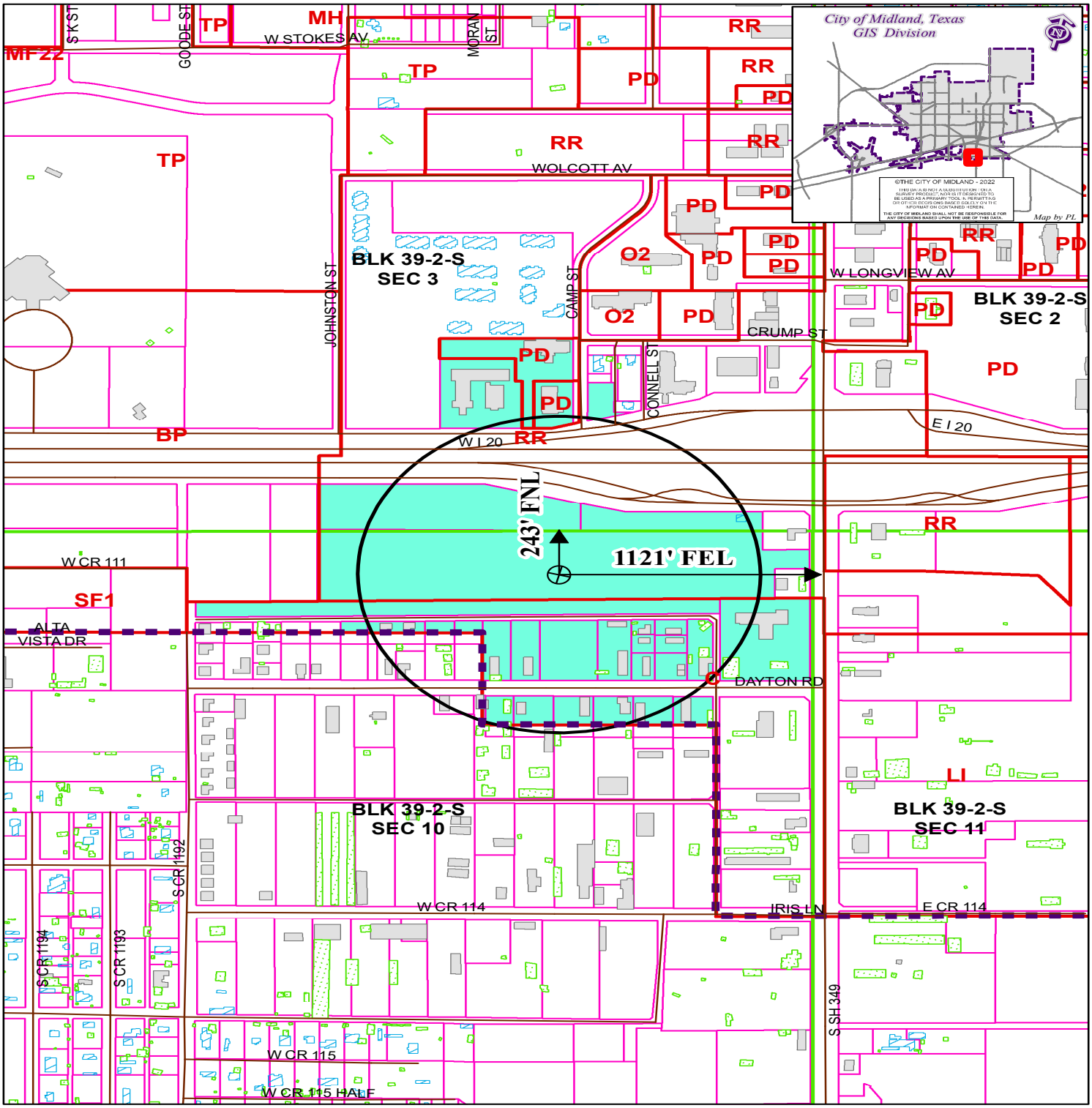
County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Pena
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8



LOCATION AND ZONING MAP

Oil - 044250 - 2022 **Scale: 1" = 600'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 243' FNL and 1,121' FEL, Section 10, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,121 feet west of Rankin Highway and 243 feet south of I-20.

Mustang 160 MIPA Unit #H160MS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F, 1F2, 1F3	ONE-FAMILY DWELLING	C1, C2, C3	LOW RETAIL COMMERCIAL
MH	MOBILE HOME DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
TH	TOWNHOUSE DWELLING	LI	LIGHT INDUSTRY
2F	TWO-FAMILY DWELLING	HI	HEAVY INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING		

SCALE: 1" = 300'

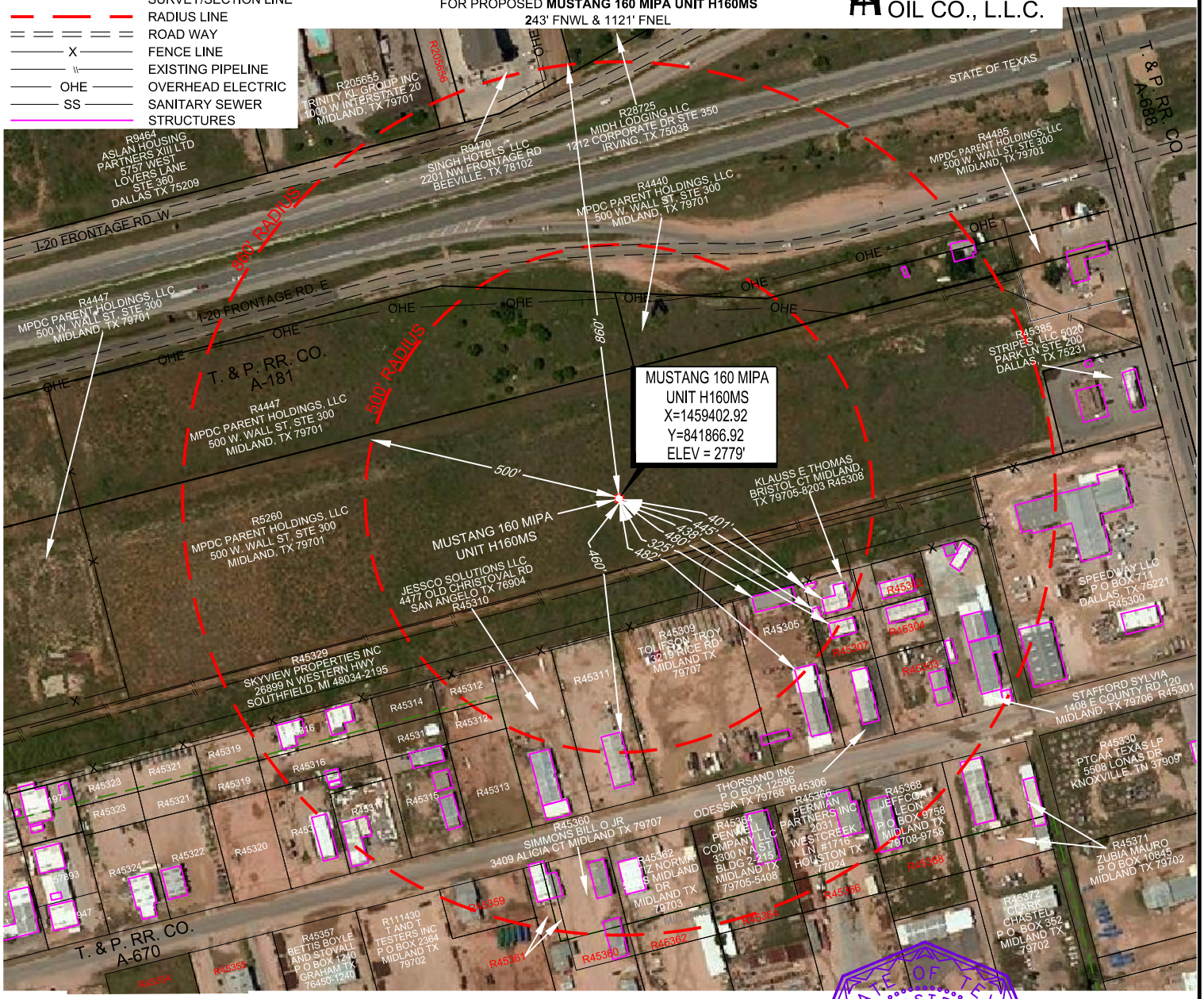
0' 150' 300'

LEGEND

- SURVEY/SECTION LINE
- RADIUS LINE
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- SANITARY SEWER
- STRUCTURES

SECTION 10, BLOCK 39, T-2-S
T. & P. RR. CO. SURVEY, A-670
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS
SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **MUSTANG 160 MIPA UNIT H160MS**
243' FNWL & 1121' FNEL

PERMIAN DEEP ROCK OIL CO., L.L.C.



STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL LAND SURVEYOR

Jeffery N. Lueders, R.P.L.S. No. 6512
MAY 7, 2021

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

MUSTANG 160 MIPA UNIT H160MS	REVISION: INT	DATE
	DRH	05/25/2022
DATE: 05/18/2022	DRH	05/26/2022
FILE: CD_MUSTANG_160MS_REV2		
DRAWN BY: DRH		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS COORDINATE
3. SYSTEM OF 1927, U.S. SURVEY FEET.
4. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
5. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
6. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

PACKET 22.15 August 9, 2022

S:\SURVEY\ARRINGTON\MUSTANG_UNIT\FINAL_PRODUCTS\CITY_PERMITS\NAD27\CD_MUSTANG_160MS_REV2.DWG 5/26/2022 2:06:55 PM dharris

City Council Meeting

Item Number: 23

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: The proposed granting of an oil and gas well permit to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the oil and gas well Rebel #H120MS; said well being generally located 380 feet east of South Lamesa Road and 463 feet south of I-20 (DISTRICT 2) (DEVELOPMENT SERVICES)

Purpose:

The proposed granting of oil and gas well permits to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the following oil and gas well Rebel #H120MS; said well being generally located 380 feet east of South Lamesa Road and 463 feet south of I-20. Council may consider these permits following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibit. A 16 ft. sound wall will be used during drilling and completion operations being located on the north side of location. Tank battery is in the county. There have been previous permitted applications near this well pad requiring the same variances. The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

.
(1) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.
(2) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well
(3) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation due to no city water is available.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris William Jr.

City Manager's Office

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
06/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions within Rebel Unit

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped pastures, service company yards and apartment complex

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Rebel #H120MS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 183' FNL & 380' FWL,
Section 12 Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: Road use and repair agreement attached**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Compnay
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

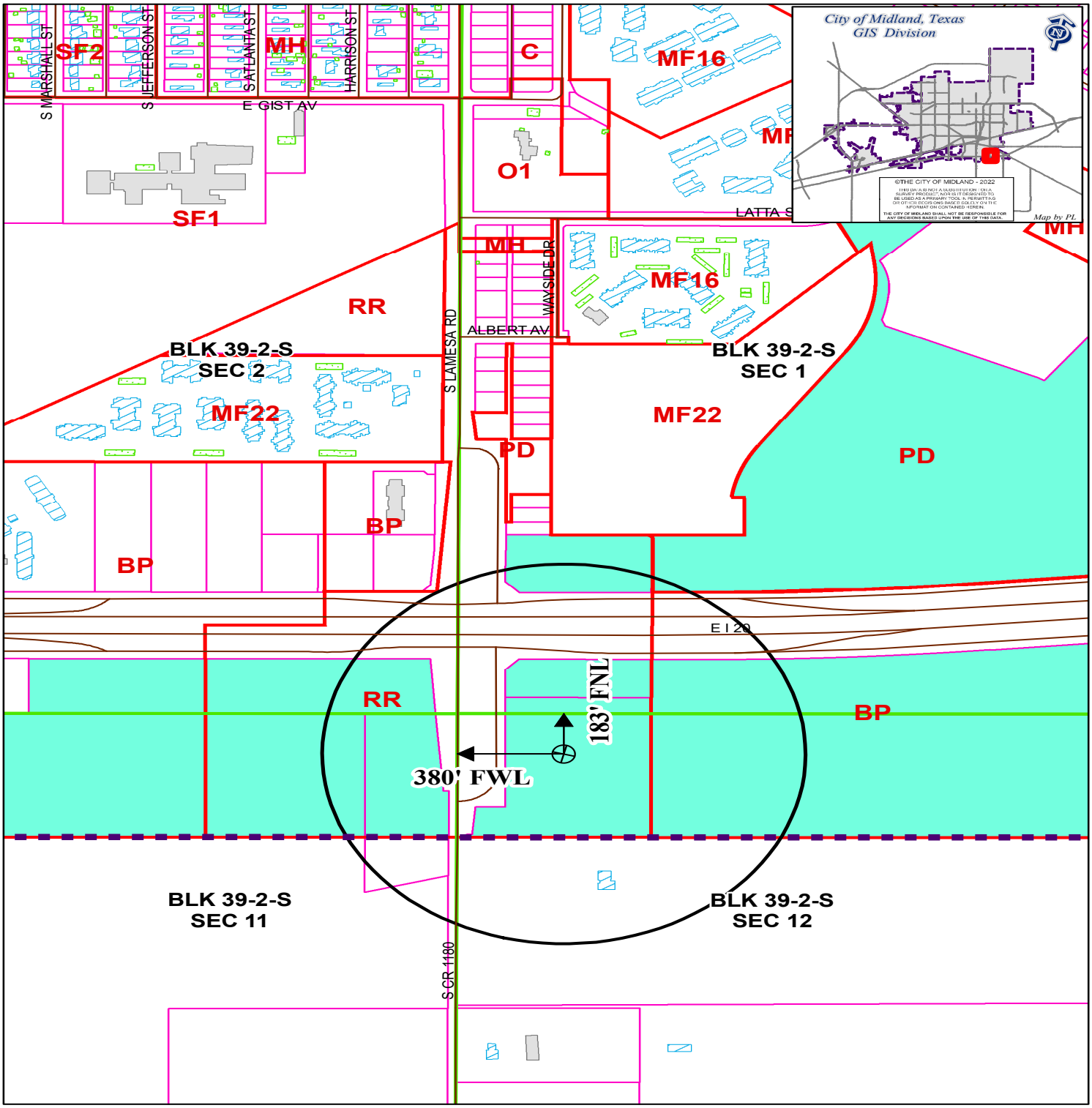
County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Peña
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8



LOCATION AND ZONING MAP

Oil - 044252 - 2022 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 183' FNL and 380' FWL, Section 12, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 380 feet east of South Lamesa Road and 463 feet south of I-20.

Rebel #H120MS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

SCALE: 1" = 300'

0' 150' 300'

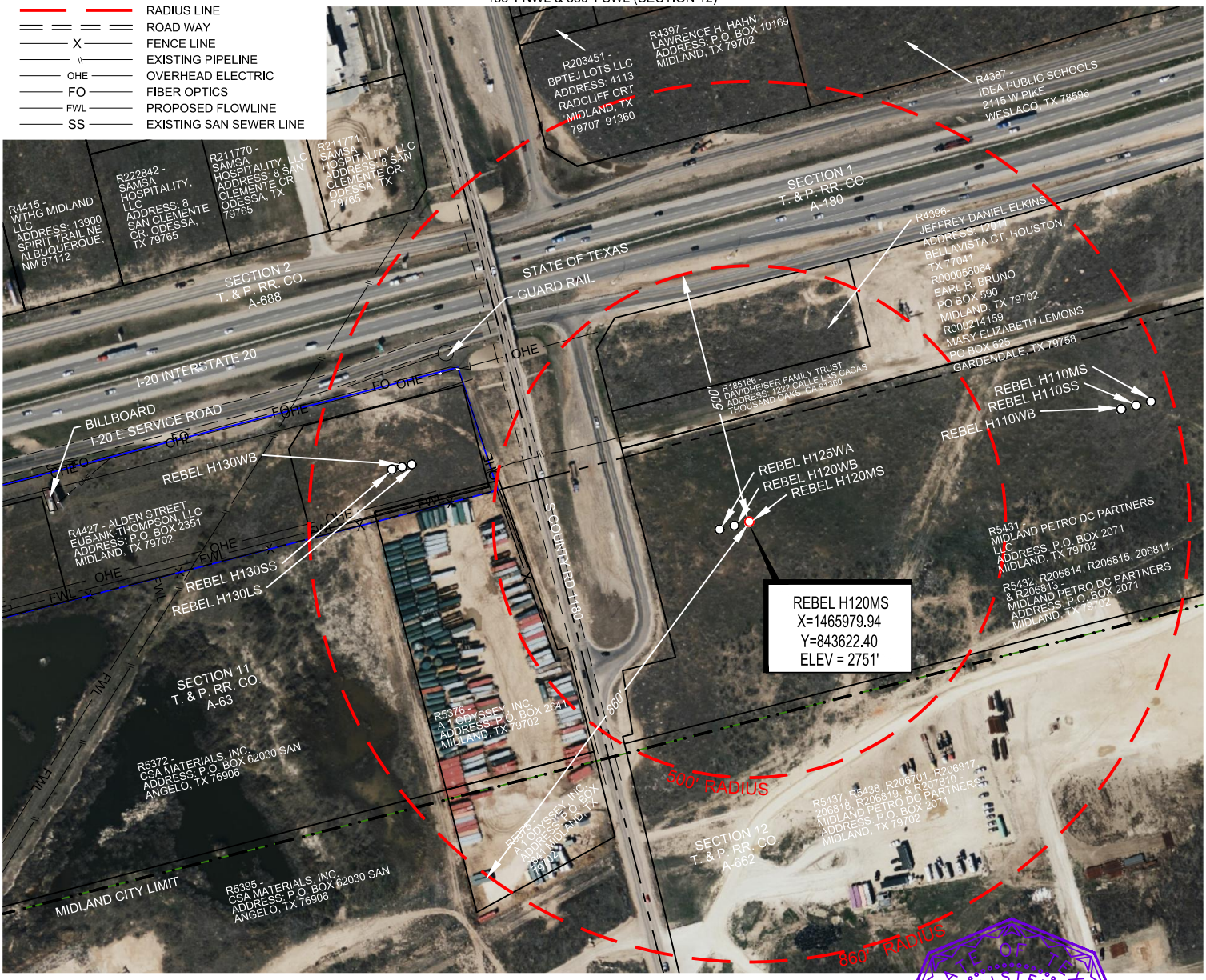
LEGEND

- SURVEY/SECTION LINE
- TRACT BORDER
- RADIUS LINE
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- FO — FIBER OPTICS
- FWL — PROPOSED FLOWLINE
- SS — EXISTING SAN SEWER LINE

SECTION 12, T. & P. RR. CO. SURVEY, A-662
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **REBEL H120MS**
183' FNWL & 380' FSWL (SECTION 12)

PERMIAN DEEP ROCK OIL CO., L.L.C.



STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

N

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

Jeffrey N. Lueders, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: October 7, 2021

REBEL H120MS	REVISION: INT	DATE
	DRH	05/17/2022
DATE: 04/11/2022	DRH	05/27/2022
FILE: CD_REBEL_H120MS_REV2		
DRAWN BY: DRH		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. THIS PROPOSED LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED PERMIAN DEEP ROCK OIL CO., LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE CITY OF MIDLAND, MIDLAND COUNTY, TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
4. OWNERSHIP INFORMATION SHOWN HEREON WAS TAKEN FROM THE CITY OF MIDLAND, TEXAS GIS SITE.
5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

S:\SURVEY\ARRINGTON\DP_7B_UNIT\FINAL_PRODUCTS\CITY_PERMITS\CD_REBEL_H120MS_REV2.DWG 5/27/2022 9:01:37 AM dharris

EXHIBIT "G"

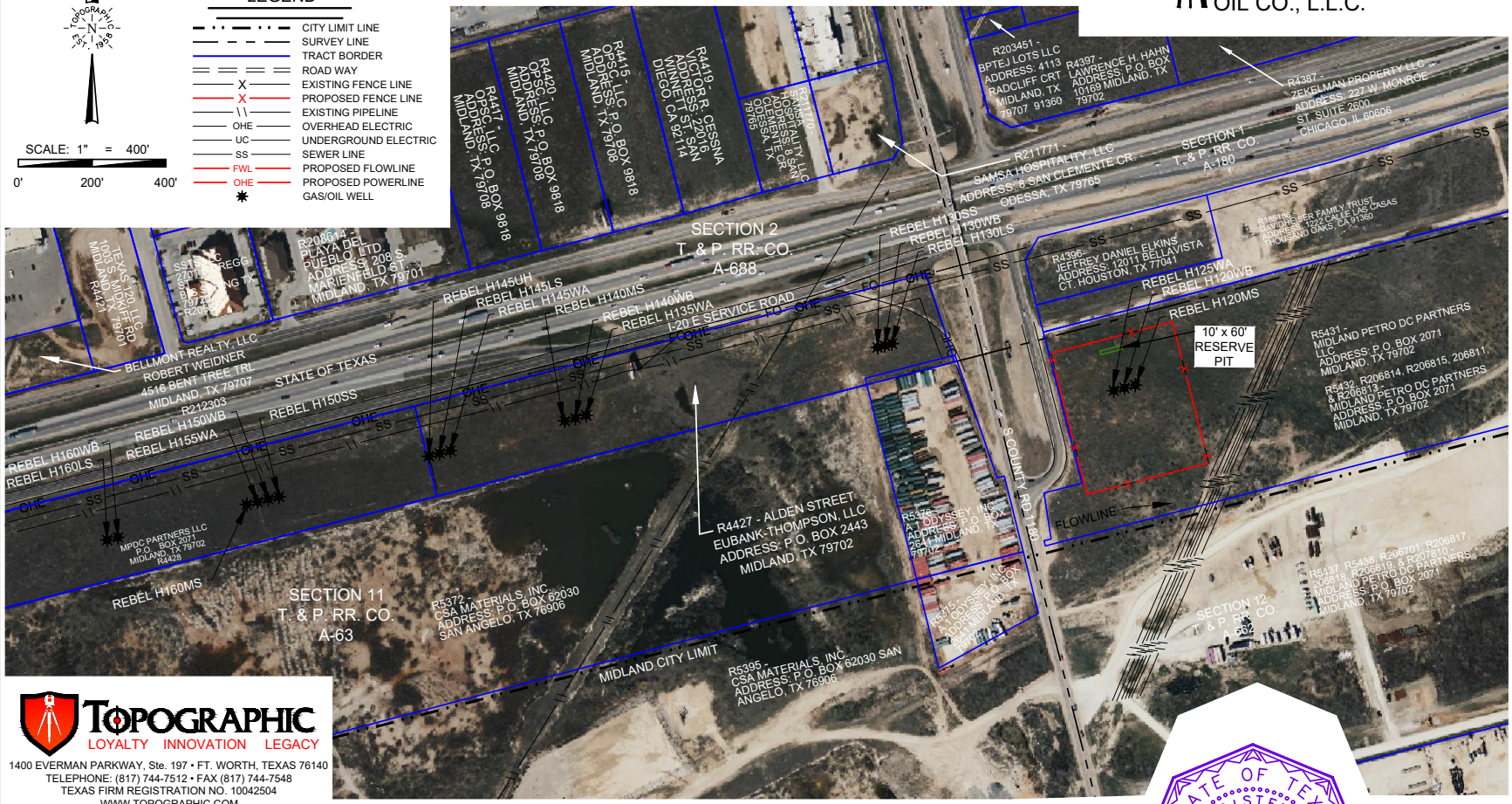
SECTION 12, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-662
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.

SCALE: 1" = 400'
0' 200' 400'

LEGEND

- CITY LIMIT LINE
- SURVEY LINE
- TRACT BORDER
- ROAD WAY
- EXISTING FENCE LINE
- PROPOSED FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- SEWER LINE
- PROPOSED FLOWLINE
- PROPOSED POWERLINE
- GAS/OIL WELL



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TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

REBEL UNIT
CITY PERMIT

DATE:	12/22/2021
FILE:	SK_REBEL_UNIT_PERMIT_E_PAD_REV5
DRAWN BY:	DRH
SHEET :	3 OF 8

REVISION:	
INT	DATE
DRH	01/04/2022
DRH	01/14/2022
DRH	04/11/2022
DRH	04/14/2022
DRH	04/26/2022

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY FOR PROPOSED UTILITIES AND SITES, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY PERMIAN DEEP ROCK OIL CO., L.L.C. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. ALL PROPOSED INFRASTRUCTURE SHOWN HEREON IS SOLELY FOR THE PURPOSE OF APPLYING FOR A PERMIT WITH THE CITY OF MIDLAND, TEXAS. THIS IS EXHIBIT IS NOT TO BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH THE T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THESE ARE FOR PLANNING PURPOSES ONLY.
5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
LAND SURVEYOR
PROFESSIONAL

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: October 7, 2021

S:\SURVEY\ARRINGTON\DP_7B_UNIT\FINAL_PRODUCTS\SKETCH\SK_REBEL_UNIT_PERMIT_E_PAD_REV5.DWG 4/26/2022 2:44:30 PM dharris

City Council Meeting

Item Number: 24

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: The proposed granting of an oil and gas well permit to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the oil and gas well Rebel #H130SS; said well being generally located 271 feet west of South Lamesa Road and 205 feet south of I-20 (DISTRICT 2) (DEVELOPMENT SERVICES)

Purpose:

The proposed granting of oil and gas well permits to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the following oil and gas well Rebel #H130SS; said well being generally located 271 feet west of South Lamesa Road and 205 feet south of I-20. Council may consider these permits following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibit. A 16 ft. sound wall will be used during drilling and completion operations being located on the north side of location. Tank battery is in the county. There have been previous permitted applications near this well pad requiring the same variances. The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

.
(1) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.
(2) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well
(3) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation due to no city water is available.
(4) Permian Deep Rock Oil Company requests variance to the Road Repair Agreement due to no city streets will be used.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris Williams Jr.

City Manager's Office

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
06/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions within Rebel Unit

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped pastures, service company yards and apartment complex

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Rebel #H130SS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 90' FSL & 271' FEL,
Section 2 Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Compnay
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Peña
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8

EXHIBIT "G"

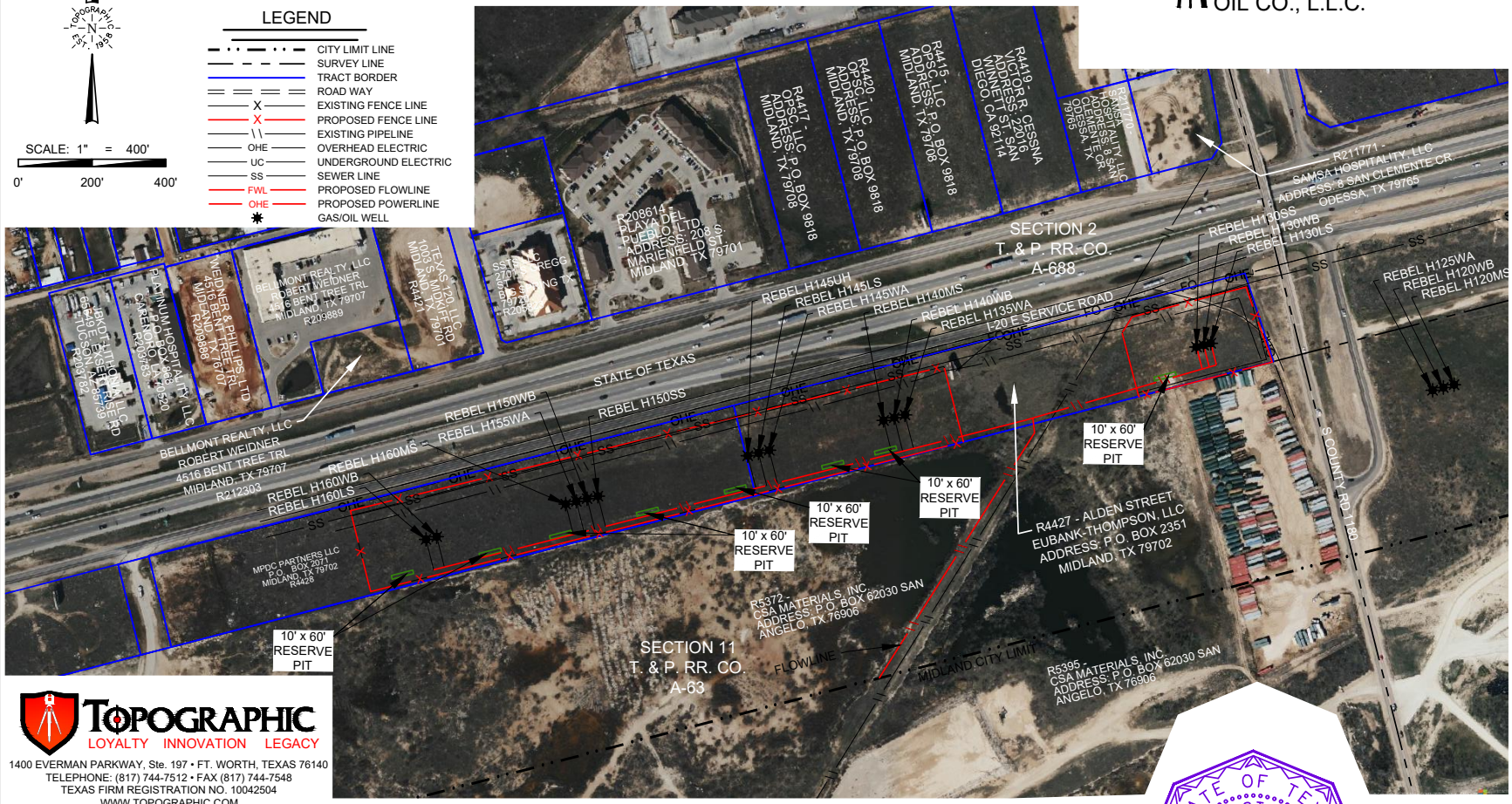
SECTION 2, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-688
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.

LEGEND

- CITY LIMIT LINE
- SURVEY LINE
- TRACT BORDER
- ROAD WAY
- EXISTING FENCE LINE
- PROPOSED FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- SEWER LINE
- PROPOSED FLOWLINE
- PROPOSED POWERLINE
- GAS/OIL WELL

SCALE: 1" = 400'
0' 200' 400'



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LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

REBEL UNIT
CITY PERMIT

REVISION:	
INT	DATE
DRH	12/17/2021
DRH	01/14/2022
DRH	03/07/2022
DRH	04/07/2022
DRH	04/14/2022

DATE: 12/07/2021
FILE: SK_REBEL_UNIT_PERMIT_REV5
DRAWN BY: DRH
SHEET : 3 OF 8

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY FOR PROPOSED UTILITIES AND SITES, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY PERMIAN DEEP ROCK OIL CO., L.L.C. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
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5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: November 23, 2021

S:\SURVEY\ARRINGTON\DP_7B_UNIT\FINAL_PRODUCTS\SKETCH\SK_REBEL_UNIT_PERMIT_REV5.DWG 4/14/2022 12:36:35 PM dharris

SCALE: 1" = 300'

0' 150' 300'

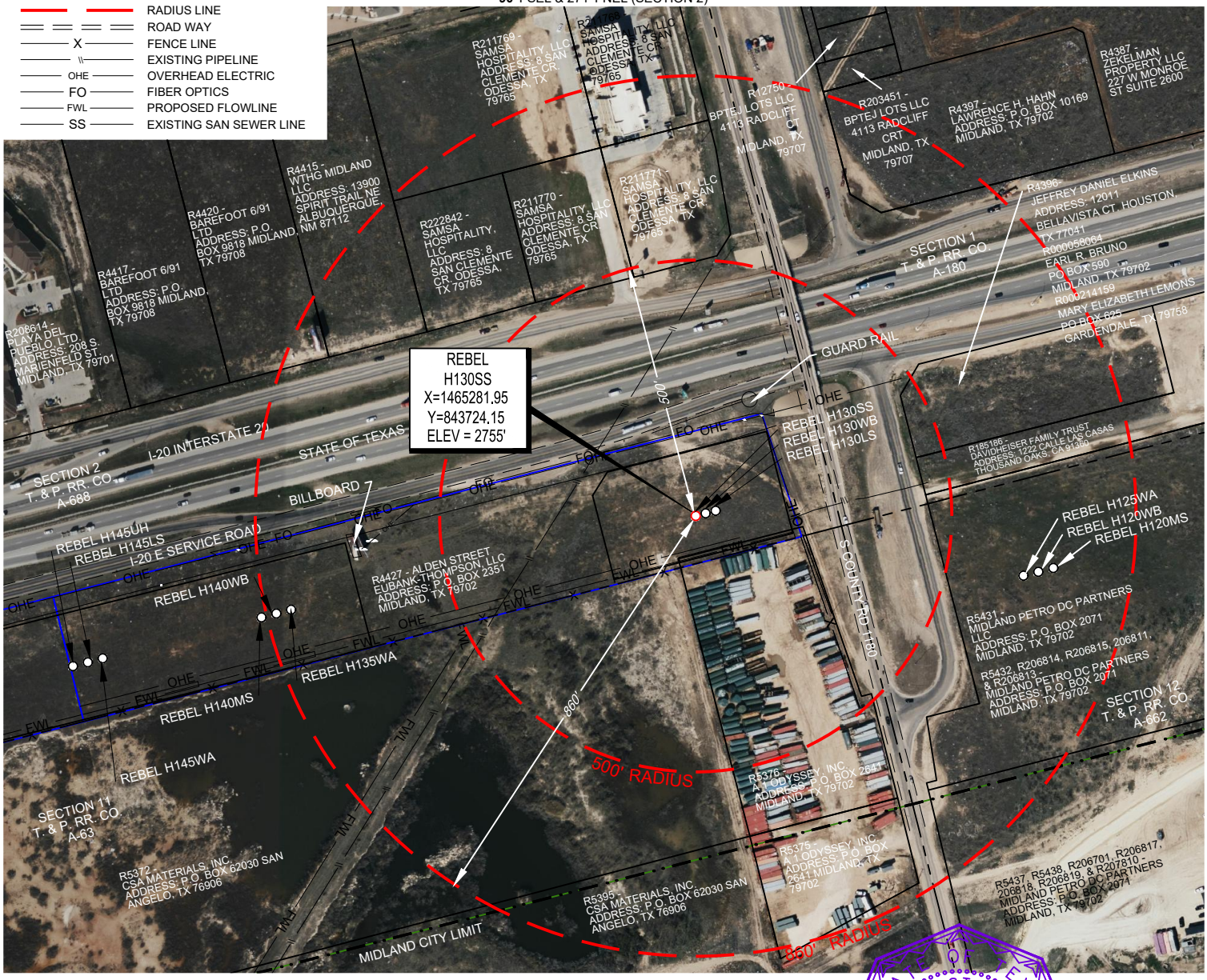
LEGEND

- SURVEY/SECTION LINE
- TRACT BORDER
- RADIUS LINE
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- FIBER OPTICS
- PROPOSED FLOWLINE
- EXISTING SAN SEWER LINE

SECTION 2, T. & P. RR. CO. SURVEY, A-688
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **REBEL H130SS**
90' FSEL & 271' FNEL (SECTION 2)

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

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1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
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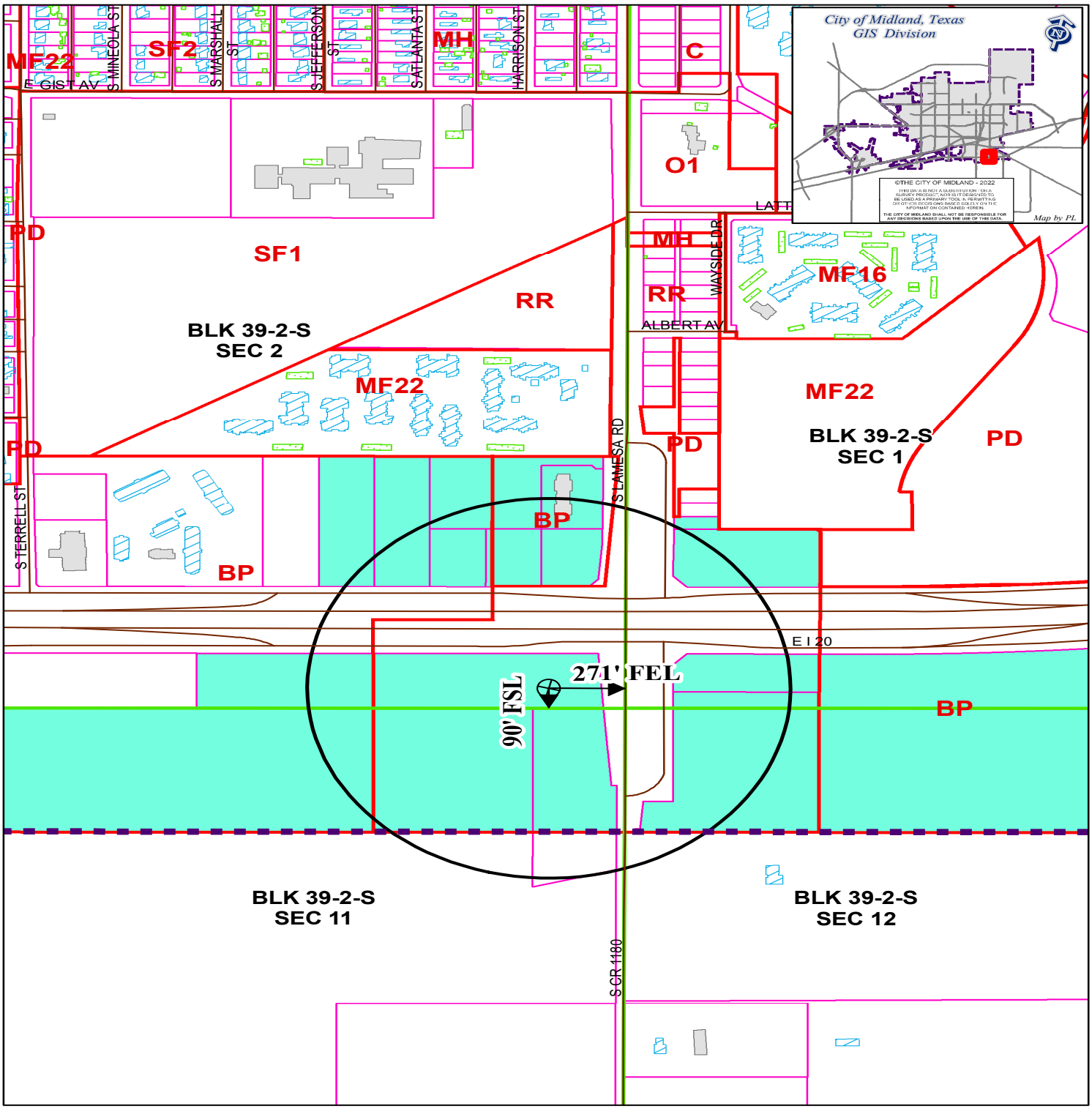
STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: NOVEMBER 24, 2021

REBEL H130SS	REVISION: INT	DATE
	DRH	05/17/2022
DATE: 04/11/2022		
FILE: CD_REBEL_H130SS_REV1		
DRAWN BY: DRH		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
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5. DISTANCES SHOWN HEREON TO EXISTING STRUCTURES ARE SCALED PER AERIAL MAP.

PACKET 24.8 August 9, 2022



LOCATION AND ZONING MAP

Oil - 044253 - 2022 **Scale: 1" = 400'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 90' FSL and 271' FEL, Section 2, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 271 feet west of South Lamesa Road and 205 feet south of I-20.

Rebel #H130SS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, 02	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
MH	MOBILE HOME DWELLING	C1, C2, C3	COMMERCIAL
TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

City Council Meeting

Item Number: 25

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Ron Jenkins, Oil and Gas Coordinator

Subject: The proposed granting of an oil and gas well permit to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the oil and gas well Rebel #H140MS; said well being generally located 1,142 feet west of South Lamesa Road and 185 feet south of I-20 (DISTRICT 2) (DEVELOPMENT SERVICES)

Purpose:

The proposed granting of oil and gas well permits to Permian Deep Rock Oil Co., LLC ("Operator") for the drilling of the following oil and gas well Rebel #H140MS; said well being generally located 1,142 feet west of South Lamesa Road and 185 feet south of I-20. Council may consider these permits following a 30-day public comment period and at a regularly scheduled meeting. No notices of objection received.

Recommended City Council Action:

Directional / Informational

Fiscal Impact:

There is no cost to the City to process this application.

Discussion:

The Oil and Gas Advisory Committee has reviewed the well site in detail and recommends approval with updated exhibit. A 16 ft. sound wall will be used during drilling and completion operations being located on the north side of location. Tank battery is in the county. There have been previous permitted applications near this well pad requiring the same variances. The operator has a surface agreement with the surface owner. Receiving support of the Oil & Gas Advisory Committee, Permian Deep Rock Oil is requesting the following variances:

.
(1) Permian Deep Rock Oil Company requests to allow for twenty-four-hour fracing operations.
(2) Permian Deep Rock Oil Company requests variance for fence of the drill pad instead of individual well
(3) Permian Deep Rock Oil Company requests a variance to the requirement of landscaping and irrigation due to no city water is available.
(4) Permian Deep Rock Oil Company requests variance to the Road Repair Agreement due to no city streets will be used.

Attachments: Applications; Location maps; Exhibit - Drill site maps, Exhibit – Flow Line Location.

Morris Williams Jr.

City Manager's Office

APPLICATION FOR OIL AND GAS PERMIT

(Pursuant to Midland City Ordinance No. 8769)

I. General Information

Date	Operator Name (must match W-1)	Operator Address
06/01/2022	Permian Deep Rock Oil Co., LLC	P.O. Box 11405 Midland, TX 79702

Representative Name	Representative Address (within Midland City Limits)	Rep. Tele.
Kyle M. Hammond	500 W. Wall St. Ste 300 Midland, TX 79701	432-682-6685 Rep. Fax 432-684-4519
Fee: $4,000.00 Rec'd Yes ✓ No___	**NOTE: All attachments need to bound and put in a binder before submitting.**	**Pages 1-4**

Permit Compliance Contact (Choose 1):

Option A:

24/7 Answering Services - No. 1 (Tele.): **No. 2 (Tele.):**

Option B:

Company Compliance Representative (Name, Address, Local Telephone) ***(ATTACH STATEMENT AS EXHIBIT A):*** See Exhibit "A"

Emergency Contact Representative (Name, Address, 24-Hour Tele. No.):

See Exhibit "A"

Other Permitted Wells in City ***(ATTACH EXHIBIT B*** **[see § J(26)]).** See Exhibit "B"

II. Mineral Ownership

Name(s) and Address(es) of Mineral Estate Lessors (under applicable lease):

1.

2.

3.

ATTACHED AS EXHIBIT C **is** List of subdivisions within Rebel Unit

See Exhibit "C"

III. Surface Ownership & Use

General Description of Current Surface Use (within 860 feet of proposed surface location):
Surface use: Undeveloped pastures, service company yards and apartment complex

See Exhibit "D"

ATTACHED AS EXHIBIT D **is** ,

Current Tax Roll from Midland Central Appraisal District), **which lists**

the name(s) and address(es) of all surface owners within 860 feet of the surface well location. [See § J(7)].

***ATTACHED AS EXHIBIT E* is a *(map/p lat/satellite/aerial photo)* depicting all Residences, commercial structures, public buildings, all publicly dedicated Streets and alleys, Rights of Way, and permanent accessory structures surrounding the proposed Drill Site. The *(map/p lat/satellite/aerial photo)* includes two circles, as required by the Ordinance—one depicting a 500 foot radius and one depicting an 860 foot radius from the proposed well's surface location. [See § J(10)].**

***ATTACHED AS EXHIBIT F* is a copy of the notification letter(s) sent to 100 percent of the surface owners, Certified Mail, Return Receipt Requested. [See § J(36)].**

IV. Well & Operations Information

Proposed Well Name: Rebel #H140MS

Proposed Hole Size, Casing Program and Cementing Program (attach Exhibit as Necessary)[See § J(11) and § L(4)]:

See Exhibit "G"

Legal Description of Proposed Well Site: SHL: 110' FSL & 1142' FEL,
Section 2 Block 39, T-2-S, T&PRR Co. Survey, Midland County, Texas

***ATTACHED AS EXHIBIT G* is the Location Site Plan [See § J(9)].**

***ATTACHED AS EXHIBIT H* is the Map with the proposed transportation route(s) and road(s) for equipment, chemicals, or refuse products used or produced in the proposed oil and gas operations. [See § J(12)].**

***ATTACHED AS EXHIBIT I* is a copy of the approved Texas Railroad Commission permit to drill (Form W-1), together with all attachments *(also file copy of W-1 with City Secretary before commencement of drilling operations).* [See § J(16) and (20)].**

***ATTACHED AS EXHIBIT J* is a copy of the required TCEQ report as to depth of usable quality ground water. [See § J(17)].**

***ATTACHED AS EXHIBIT K (if applicable)* is the list of alternative locations developed in consultation with the Oil & Gas Advisory Committee. [See § J(27)].**

***ATTACHED AS EXHIBIT L* is the Fencing and Irrigation Plan. [See § J(30)].**

***ATTACHED AS EXHIBIT M*: No city roads will be used**

***ATTACHED AS EXHIBIT N* is the Concept Plan depicting the proposed Operations Site (which includes tanks, roads, power lines, and pipeline routes). [See § J(32)].**

Description of Public Utilities required during (1) drilling and (2) operations:

(1) Drilling: None

(2) Operations: Oncor

Description of water source to be used during Drilling: Water is to be piped in from our water wells, drill additional water wells or truck fresh water in. All brine water will be trucked in.

Description of all electric lines to production facilities (reference exhibits as necessary) [See § L(10)]:

See Exhibit "N"

Plan detailing construction, location, and closure of pits used for Drilling and Completion operations (attach exhibit if necessary) [See § J(35)]: Trench and encapsulate per TXRRC Rule 27(c)(10)(v)

See Exhibit "O"

V. Additional Required Exhibits

***ATTACHED AS EXHIBIT P* is the *Letter of Credit/Certificate of Deposit* in accordance with Subsection (K)(2). [See § J(18)].**

***ATTACHED AS EXHIBIT Q* : Tax certificates from Midland Central Appraisal District to be submitted indicating that all taxes on personal and real property, including minerals, owned by applicant are current. (See § J(29)**

***ATTACHED AS EXHIBIT R* is the required Insurance Certificate. [See § J(19) and § K(3)].**

***ATTACHED AS EXHIBIT S (if applicable)* is the Drainage Plan relating to Applicant's proposed operations. [See § J(21)].**

***ATTACHED AS EXHIBIT T* is Applicant's Emergency Action Response Plan. [See § J(22)].**

***ATTACHED AS EXHIBIT U* is Applicant's Hazardous Materials Management Plan, a copy of which has been submitted and is on file with the Midland Fire Department. [See § J(23)].**

ATTACHED AS EXHIBIT V: Applicants variances

Permian Deep Rock Oil Compnay
[NAME OF COMPANY]

By _____
Its General Manager

State of Texas)

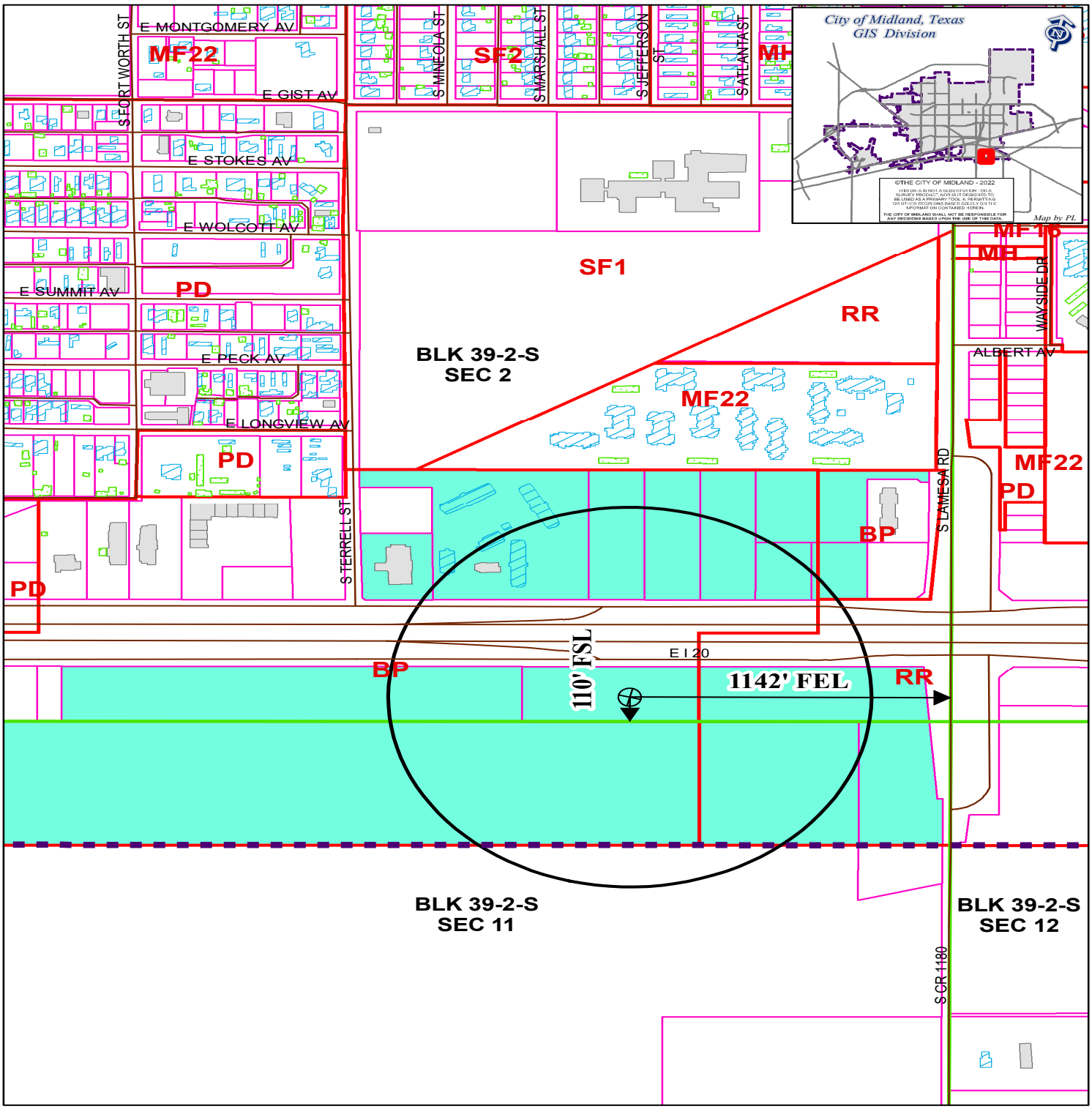
County of Midland)

Kyle Hammond , personally appeared before me, and being first duly sworn declared he/she signed the application in the capacity designated, if any, and further states that he/she has read the above application and attached exhibits and the statements therein are true and correct to the best of their knowledge.

Estella Peña
Notary Public, State of Texas

[S E A L]

ESTELLA PENA
Notary Public, State of Texas
My Commission Expires
August 03, 2025
NOTARY ID 13123361-8



LOCATION AND ZONING MAP

Oil - 044254 - 2022 **Scale: 1" = 500'**

Consider a request for a Permit to drill an Oil and Gas Well within the City Limits located 110' FSL and 1,142' FEL, Section 2, Block 39, T-2-S, T&P RR CO Survey, Midland County, Texas.

Generally located 1,142 feet west of South Lamesa Road and 185 feet south of I-20.

Rebel #H140MS

LEGEND

CITY PARCELS	PUBLIC BLDGS	CITY LIMITS
COUNTY PARCELS	PRIVATE BLDGS	860 FT. BUFFER
ZONING	ACCESSORY BLDGS	SURVEY SEC.

ZONING DISTRICTS:

FD	FUTURE DEVELOPMENT	BP	BUSINESS PARK
PD	PLANNED DISTRICT	P	PARKING
AE	AGRICULTURE ESTATE	01, O2	OFFICE
CE	COUNTRY ESTATE	NS	NEIGHBORHOOD SERVICE
1F1, 1F2, 1F3	ONE-FAMILY DWELLING	GR	GENERAL RETAIL
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TH	TOWNHOUSE DWELLING	IP ,IP1, IP2, IP3	INDUSTRIAL PARK
2F	TWO-FAMILY DWELLING	LI	LIGHT INDUSTRY
MF1, MF2	MULTIPLE FAMILY DWELLING	HI	HEAVY INDUSTRY

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0' 150' 300'

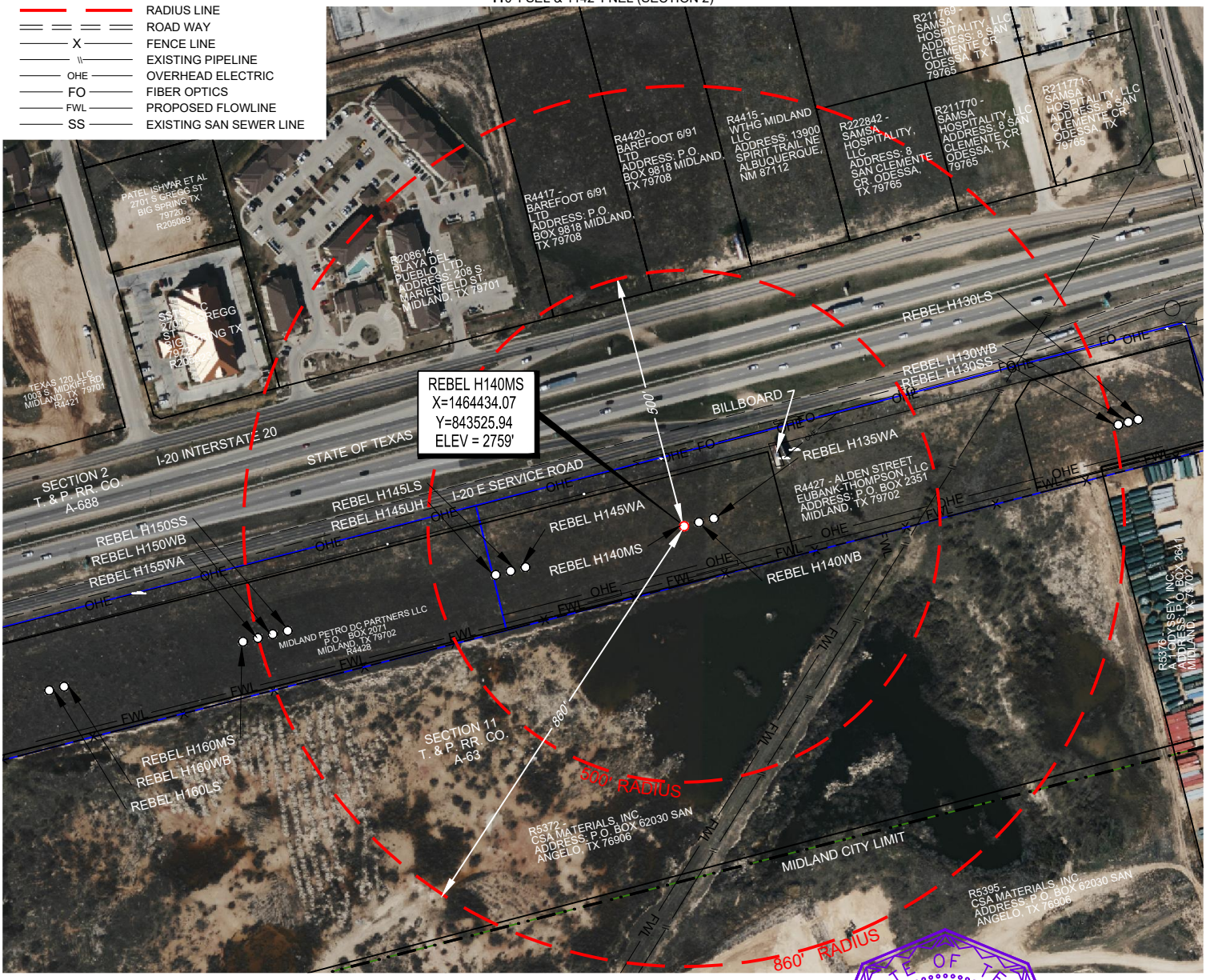
LEGEND

- SURVEY/SECTION LINE
- TRACT BORDER
- RADIUS LINE
- ROAD WAY
- X — FENCE LINE
- \\ — EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- FO — FIBER OPTICS
- FWL — PROPOSED FLOWLINE
- SS — EXISTING SAN SEWER LINE

SECTION 2, T. & P. RR. CO. SURVEY, A-688
CITY OF MIDLAND, MIDLAND COUNTY, TEXAS

SHOWING STRUCTURES WITHIN 500' RADIUS
AND PROPERTY OWNERS WITHIN 860' RADIUS
FOR PROPOSED **REBEL H140MS**
110' FSEL & 1142' FNEL (SECTION 2)

PERMIAN DEEP ROCK OIL CO., L.L.C.



N

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LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
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STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

Jeffrey N. Lueders, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: APRIL 5, 2022

REBEL H140MS	REVISION: INT	DATE
	DRH	04/11/2022
DATE: 04/06/2022	DRH	05/17/2022
FILE: CD_REBEL_H140MS_REV2		
DRAWN BY: DRH		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
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PACKET 25.8 August 9, 2022

EXHIBIT "G"

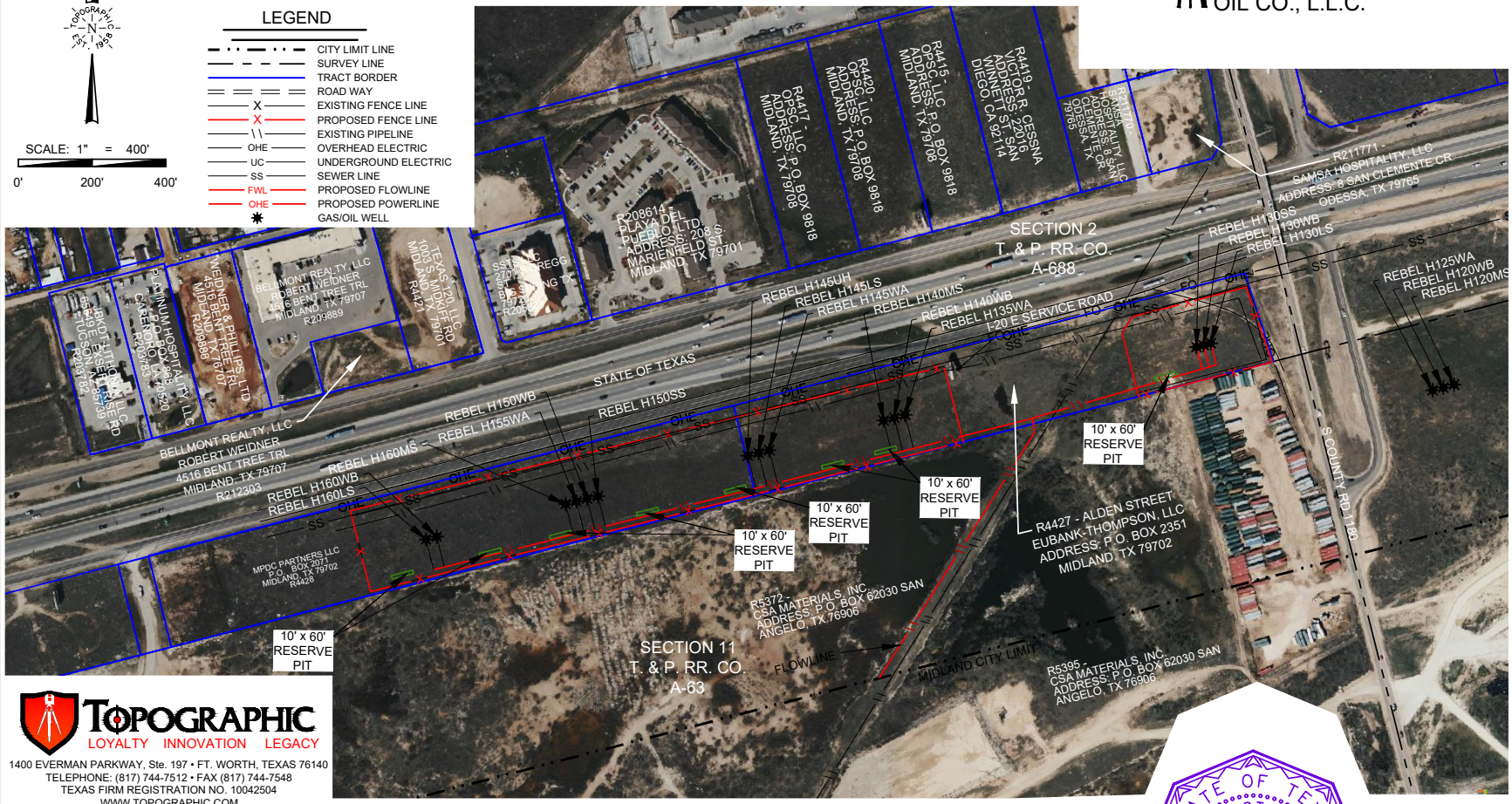
SECTION 2, BLOCK 39, T2S, T. & P. RR. CO. SURVEY, A-688
MIDLAND COUNTY, TEXAS

PERMIAN DEEP ROCK OIL CO., L.L.C.

SCALE: 1" = 400'
0' 200' 400'

LEGEND

- CITY LIMIT LINE
- SURVEY LINE
- TRACT BORDER
- ROAD WAY
- EXISTING FENCE LINE
- PROPOSED FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- SEWER LINE
- PROPOSED FLOWLINE
- PROPOSED POWERLINE
- GAS/OIL WELL



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TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

REBEL UNIT
CITY PERMIT

DATE: 12/07/2021
FILE: SK_REBEL_UNIT_PERMIT_REV5
DRAWN BY: DRH
SHEET : 3 OF 8

REVISION:	
INT	DATE
DRH	12/17/2021
DRH	01/14/2022
DRH	03/07/2022
DRH	04/07/2022
DRH	04/14/2022

NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 8.5"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
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5. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

STATE OF TEXAS
REGISTERED
JEFFREY N. LUEDERS
6512
PROFESSIONAL
LAND SURVEYOR

JEFFREY N LUEDERS, R.P.L.S. No. 6512
SURVEYED ON THE GROUND: November 23, 2021

S:\SURVEY\ARRINGTON\DP_7B_UNIT\FINAL_PRODUCTS\SKETCH\SK_REBEL_UNIT_PERMIT_REV5.DWG 4/14/2022 12:36:35 PM dharris

City Council Meeting

Item Number: 26

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Cole Furqueron, Senior Planner

Subject: AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 22, BLOCK 131, WILSHIRE PARK ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE WEST SIDE OF MONTY DRIVE, APPROXIMATELY 134 FEET NORTH OF MERCEDES DRIVE), BY PERMITTING (1) AN INCREASED MAXIMUM NUMBER OF ACCESSORY BUILDINGS, (2) A REDUCED MINIMUM FRONT YARD SETBACK AND (3) A REDUCED MINIMUM SIDE YARD SETBACK ON THE NORTH SIDE OF THE LOT; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION (DISTRICT 4) (DEVELOPMENT SERVICES)

Purpose:

The applicant, Ysidro Guzman is requesting a Special Exception from the City of Midland Zoning Ordinance, Section 5.04 – Residential Zoning District Dimensional Regulations Chart, concerning the minimum front and side yard setbacks and Section 4.09 - Accessory Buildings and Uses, concerning the maximum allowable number of accessory structures, this carport was erected without any approved permits and was reported to code compliance by a resident in the neighborhood, therefor the applicant would like to make this structure permanent within the front and side yard setback, in addition to exceeding the allowable number of accessory structures.

Recommended City Council Action:

☐ **Approve** ☒ **Deny** ☐ **Direction/Informational**

Fiscal Impact:

No City funds are required to process this request.

Discussion:

The applicant's property is located at 4516 Monty Drive, which is zoned SF-2, Single Family Dwelling District.

Per our City of Midland Zoning Ordinance, Section 5.04 – Residential Zoning District Dimensional Regulations Chart:

SF-2, Single Family Dwelling District
Lot dimensions
Minimum Side Yard Setback:
Interior Lot: 5 Feet

Minimum Front Yard Setback
Interior Lot: 20 feet

Additionally, per our Midland Zoning Ordinance, Section 4.09 – Accessory Buildings and Uses

A. Residential Accessory Buildings and Uses
Lots 7,500 SF up to 21,999 SF
Maximum number of accessory buildings: 2
Maximum square footage of all buildings (combined area): 10% of property

The applicant's property is an interior lot and zoned SF-2, Single-Family Dwelling District and therefore would have to meet the required minimum 5-foot side yard setbacks and 20-foot front yard setbacks for an interior lot as required by our zoning ordinance. The carport is currently at 0-feet from the side property line, with the possibility of being over the neighbor's property line and 0-feet from the front property line.

The applicant is requesting to reduce the required minimum side yard setback for an interior lot for the proposed carport to be zero feet and reducing the required front yard setback to be zero feet.

The applicant is also requesting to place a greater number of accessory structures on his property than are allowed in the City of Midland Zoning Ordinance. A home in the SF-2, Single-Family Dwelling District is allowed 2 accessory structures and should not exceed 10% (combined building area) of the property lot. The lot is 7,590 square feet. There are currently 4 accessory structures on property which exceeds the maximum allowable number of accessory structures. This new carport is the fifth accessory structure on the property and exceeds the 10% maximum square footage of all buildings (combined area) by 1,481 square feet.

The carport was constructed on the property without obtaining the proper building permits and

no building inspections have been performed. The applicant was informed by City Code Enforcement that the carport will have to be demolished unless a special exception is approved.

Several of the surrounding neighbors have complained via telephone conversations about this carport because no other residence in the area has been allowed to place a carport within the front yard setback. If this special exception were to be approved, it will set a precedent to allow other residents to build carport within the front yard setback of their houses. Many people within the neighborhood have stated that they will apply for a special exception for a carport in front of their house if this is allowed.

This request has been circulated to all pertinent City departments for review. Below are the departments' comments.

Engineering: (Approved)

No objection.

Transportation: (Approved)

No objection.

Fire: (Approved)

No objections.

Code Compliance: (Approved)

No Oil and Gas issues.

Building: (Approved)

No issues. All future structures must adhere to the 2018 International Building Codes, the 2015 International Energy Code, the 2017 NEC requirements, the 2015 International Fire Codes, local city ordinances, zoning requirements, established setbacks, and floodplain requirements if necessary.

Planning Analysis: (Denied)

This lot does not exhibit any hardships that are not already present in other lots around the city and through the surrounding neighborhood. The approval of this will represent an overdevelopment of the property.

As this request represents a deviation from the existing Zoning Ordinance, staff would recommend denial of this application for a Special Exception from the City of Midland Zoning Ordinance, Section 5.04 – Residential Zoning District Dimensional Regulations Chart, concerning the minimum front and side yard setbacks and Section 4.09 – Accessory Buildings

and Uses, concerning the maximum allowable number of accessory structures.

Nonetheless, should the City Council approve this request, the property shall be subject to conditions A and D:

Conditions:

A. That the property shall significantly conform to the site plan shown in Exhibit "A", which is attached hereto and incorporated herein for all purposes.

B. That north side yard setback for the proposed addition on this property shall be zero (0) feet.

C. That the minimum east front yard setback for the proposed addition on this property shall be zero (0) feet.

D. That the maximum allowable number of accessory structures on the property shall be five (5) structures.

Letters of Objection:

As of August 4, 2022, staff has not received any letters of objection.

Attachments:

Proposed Site Plan (Exhibit A)
Carport Dimensions (Exhibit B)
Application
Maps

Morris William Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE GRANTING A SPECIAL EXCEPTION FOR LOT 22, BLOCK 131, WILSHIRE PARK ADDITION, CITY AND COUNTY OF MIDLAND, TEXAS (GENERALLY LOCATED ON THE WEST SIDE OF MONTY DRIVE, APPROXIMATELY 134 FEET NORTH OF MERCEDES DRIVE), BY PERMITTING (1) AN INCREASED MAXIMUM NUMBER OF ACCESSORY BUILDINGS, (2) A REDUCED MINIMUM FRONT YARD SETBACK AND (3) A REDUCED MINIMUM SIDE YARD SETBACK ON THE NORTH SIDE OF THE LOT; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); ORDERING RECORDATION BY THE CITY SECRETARY IN THE DEED RECORDS OF MIDLAND COUNTY, TEXAS; AND ORDERING PUBLICATION

WHEREAS, the City Council modified the authority of the Board of Adjustment in Title XI, Chapter 1, Section 7 ("Section 11-1-7") of the Midland City Code; and

WHEREAS, Section 11-1-7 provides for the consideration of requests for special exceptions to the Midland Zoning Ordinance; and

WHEREAS, the Council finds that satisfactory evidence has been presented that the use to be authorized by the granting of the special exception will not be detrimental to the health, safety, comfort and welfare of the occupants of the land area near the tract on which the use to be allowed by special exception will be located; and

WHEREAS, the Council finds that it is clearly and specifically authorized by the terms of Section 11-1-7 to grant such a special exception, and said exception will be in harmony with the general purposes and intent of the zoning provisions of the Midland City Code; and

WHEREAS, after a full and fair public hearing at which all parties in interest were offered an opportunity to be heard, all pursuant to law, the Council finds it to be in the public interest to grant a special exception to the Zoning Ordinance, pursuant to Section 11-1-7, for the purposes herein stated, subject to special conditions;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE

CITY OF MIDLAND, TEXAS:

SECTION ONE. That a special exception is hereby granted for the property described as Lot 22, Block 131, Wilshire Park Addition, City and County of Midland, Texas (the "Property"). Said special exception shall allow (1) an increased maximum number of accessory buildings, (2) a reduced minimum front yard setback and (3) a reduced minimum side yard setback on the north side of the Property.

SECTION TWO. Said special exception is subject to the following special conditions:

A. That the maximum number of accessory buildings on the Property shall be five (5).

B. That the minimum front yard setback for the carport shall be zero feet (0').

C. That the minimum side yard setback on the north side of the Property for the carport shall be zero feet (0').

D. That the Property shall significantly conform to the site plan, which is attached hereto as Exhibit "A" and incorporated herein for all purposes.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance

with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION SIX. The City Secretary is hereby authorized and directed to file this ordinance with the Office of the County Clerk for purposes of recordation.

SECTION SEVEN. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2022; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

SITE PLAN

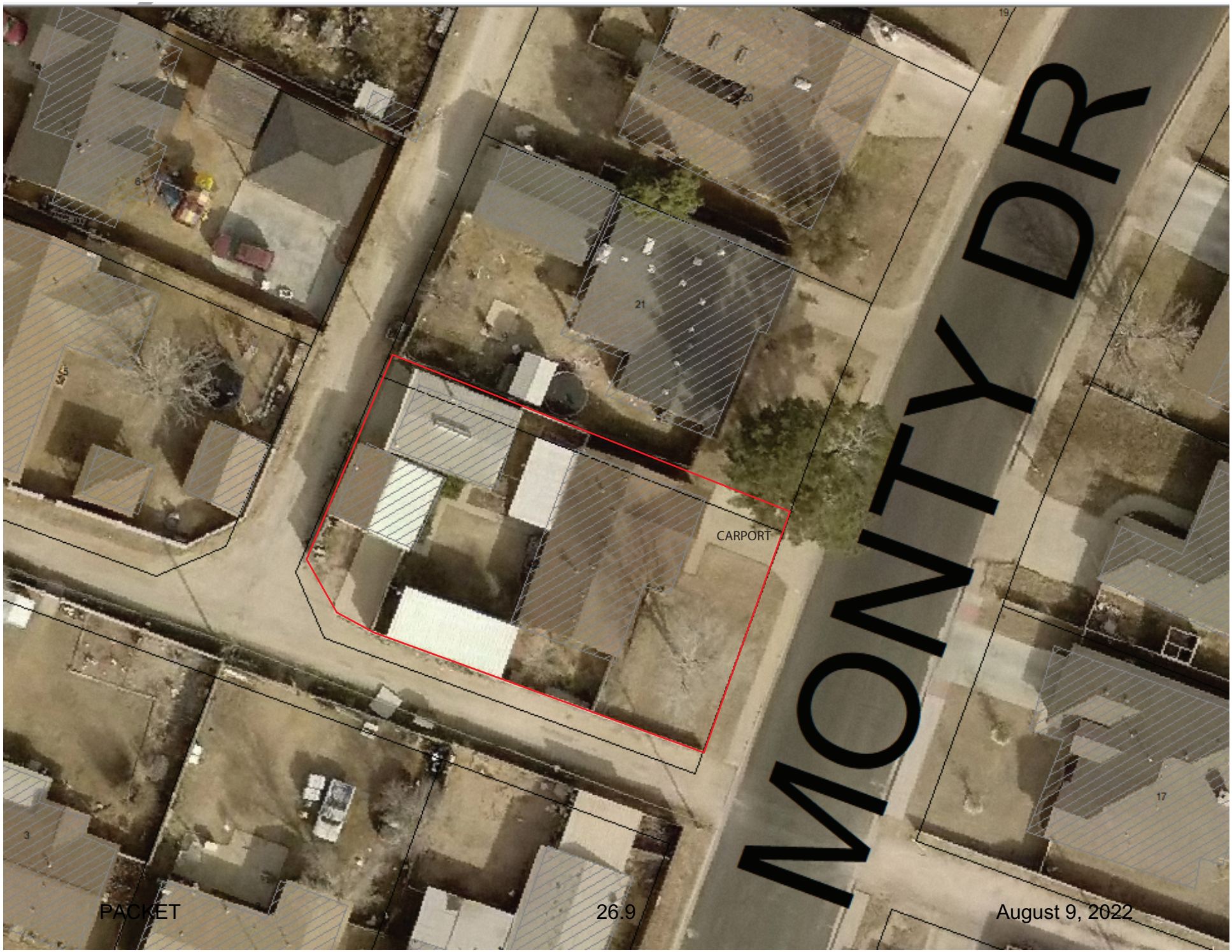


EXHIBIT "A"

MIDLAND Planning Division

Special Exception Application

Project Number: E-22-0083

Case Number: _____

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: Isidro Guzman		Phone (432) 889-6914 Email spade63laptop@yahoo.com	
Address 4516 Monty Dr	City Midland	State TX	Zip 79703

Property Owner Printed Name: Isidro Guzman		Phone (432) 889-6914 Email spade63laptop@yahoo.com	
Address 4516 Monty Dr	City Midland	State TX	Zip 79703

Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name:		Phone ( ) Email	
Address	City	State	Zip

Street Address:

Legal Description
Lot: Block: Subdivision:

Current Zoning:

This property qualifies as an exception to the City Code because:

- ☐ It is an expansion of a nonconforming use.
- ☐ There are existing nonconforming structures in the area.
- ☐ The addition of architectural or other projections of a minor extent.

Reason for Request: Building within Front Yard Set Back

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan showing:
  - Parking
  - Building Footprint
- Digital Copies of Site Plan (PDF/JPEG)

Signatures	
Applicant (signature):	Date:
Applicant (printed):	
Property Owner (signature):	Date:
Property Owner (printed) :_____	

The Special Exception shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared _____ who, being by me duly sworn, upon oath says: That (s)he is authorized by _____, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

_____
Authorized Agent (*signature*)

Subscribed and sworn to before me, this _____ day of _____, 20 ___, to certify which witness my hand and seal of office.

_____
NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☐ Property Owner Authorization	☐ Dimensioned Site Plan
☐ Application Fee	☐ Plans in Digital Format (PDF/JPEG)
Check #_____	
Received By:	Date:

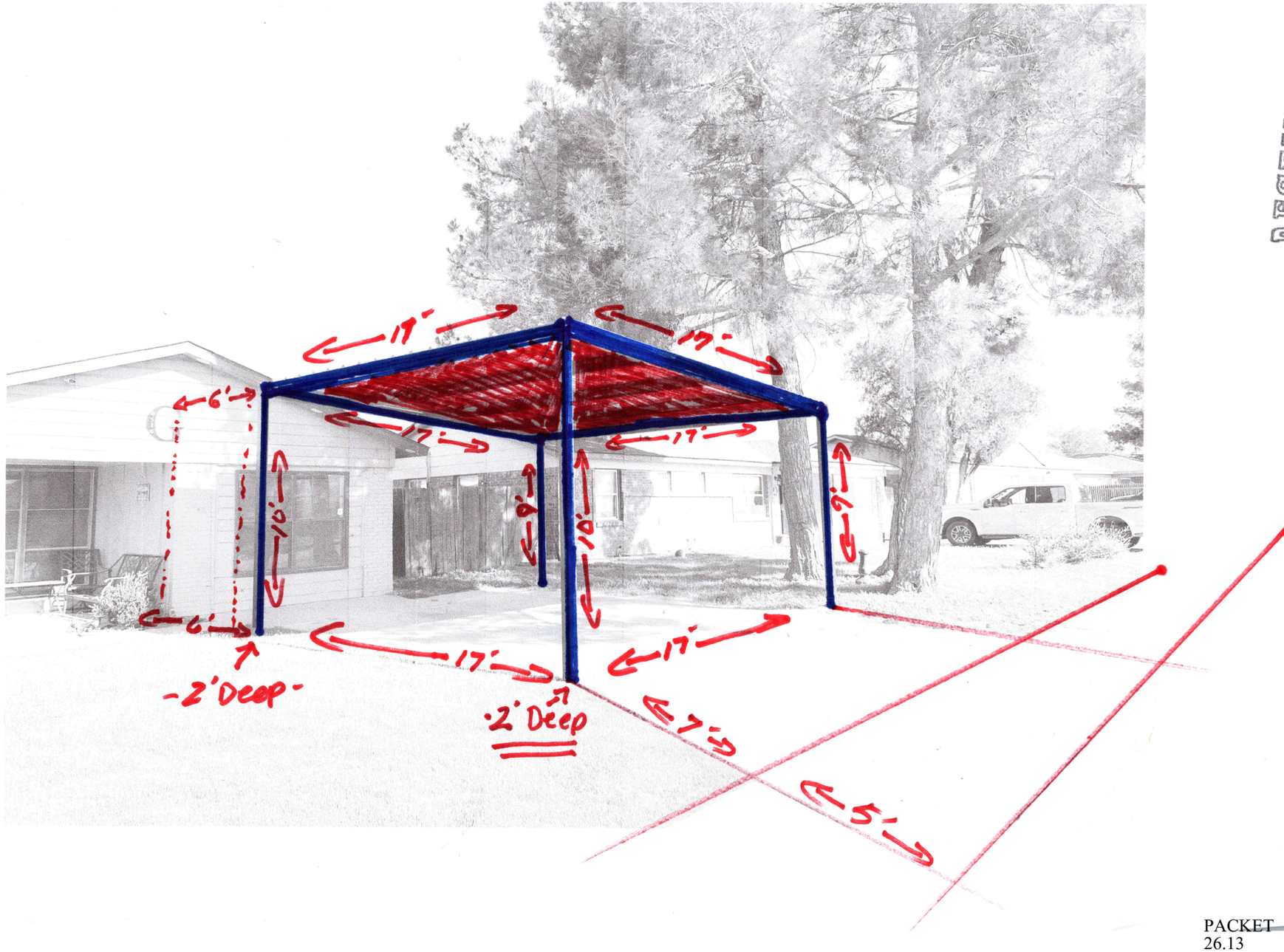
RECEIVED
JUL 07 2021
BY: CF

****Application will not be considered for scheduling until reviewed by a planner.****

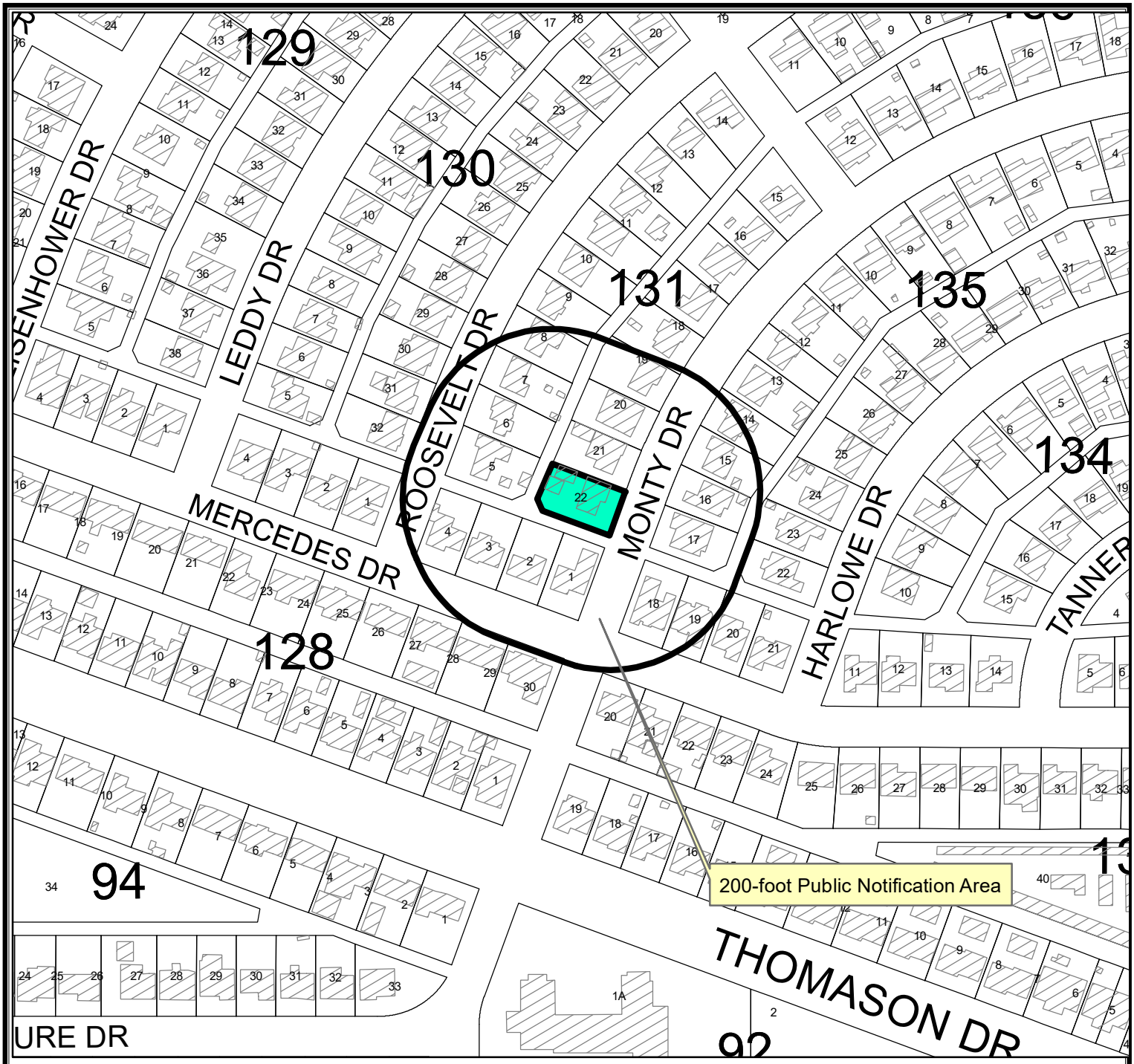
SITE PLAN



PACKET 26.12 August 9, 2022



RECEIVED
JUL 07 2021
BY:.....



LOCATION MAP

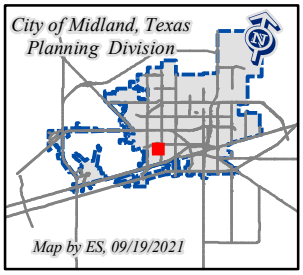
E-22-0083 **Scale: 1" = 200'**

Consider a request by Ysidro Guzman for a S pecial Exception from the City of Midland Zoning Ordinance, S ection 5.04 – Residential Zoning District Dim ensional Reg ulations Chart, concerning the minimum front and side yard setbacks and Section 4.09 - Accessory Buildings and Uses, concerning the maximum allowable number of accessaory structures on Lot 22, Block 131, Wilshire Park Addition, City and County of Midland, Texas.

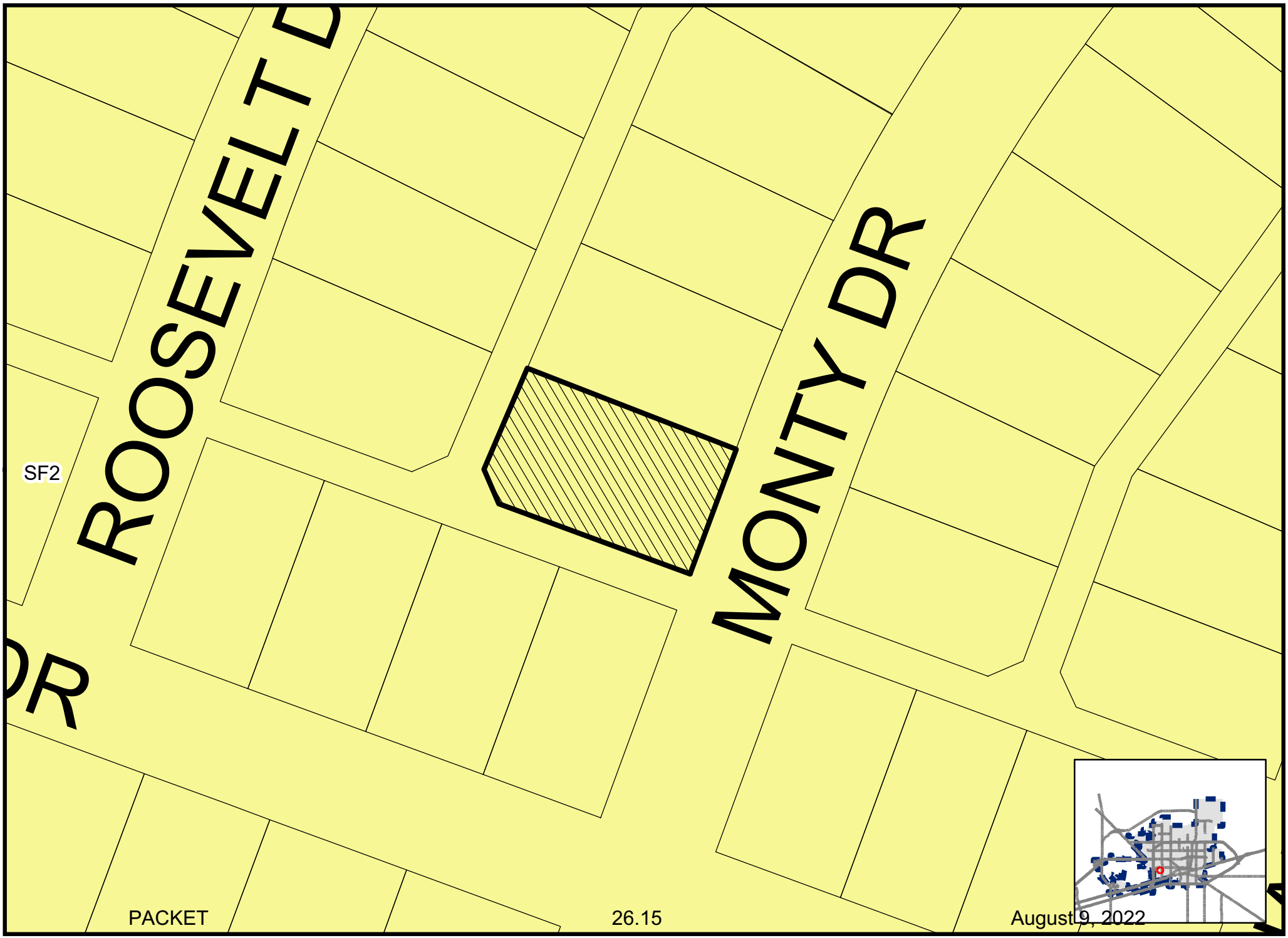
Generally located on the West side of Monty Drive, approximately 134 feet North of Mercedes - (Council District 4)

LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



©THE CITY OF MIDLAND - 2021
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



Map By ES, 7/8/2021

E-22-0083

Scale: 1" = 200'

ZONING MAP

© THE CITY OF MIDLAND - 2021: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.








WELCOME


G


4516





















City Council Meeting

Item Number: 27

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Cole Furqueron, Senior Planner

Subject: AN ORDINANCE EXTENDING THE BOUNDARIES OF THE CITY OF MIDLAND, TEXAS, BY ADDING THERETO A CERTAIN AREA ADJOINING THE PRESENT CITY LIMITS, BEING A 2.27-ACRE TRACT OF LAND OUT OF SECTION 22, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF DUMFRIES ROAD, APPROXIMATELY 3,590 FEET NORTH OF HIGHWAY 158); ORDERING PUBLICATION; AND ORDERING RECORDATION BY THE CITY SECRETARY (DEVELOPMENT SERVICES)

Purpose:

The applicants, George and Mary Barton, are requsesting an annexation of a 2.27-acre tract of land out of a 10.00-acre tract of land located in the Northwest Quarter of Section 22, Block 40 T-1-S, T&P RR Co. Survey, Midland County, Texas., located on the east side of Dumfries Road, approximately 3,590-feet north of Hwy 158, for the purpose of gaining access to City of Midland utilities.

Recommended City Council Action:

Approve

Fiscal Impact:

This request does not require any City funds.

Discussion:

The applicants, George, and Mary Barton., are requesting to annex a 2.27-acre tract of land out of a 10.00-acre tract of land located in the Northwest Quarter of Section 22, Block 40 T-1-S, T&P RR Co. Survey, Midland County, Texas. The proposed annexation will allow the

provision of City services to the property. This is considered a voluntary annexation.

On June 10, 2022, the service agreement between the City and the property was executed. This is the next step in the annexation process.

This project has been circulated to all respective departments for internal review and received no objections.

Engineering: (Approved)

No objections.

Transportation: (Approved with Conditions)

City has an interest in extending Dumfries (N CR 1260) to the north, right-of-way dedication will be required with the platting process.

Fire: (Approved)

No objections.

Building Code: (Approved)

No objections.

Oil and Gas: (Approved)

No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat.

Planning:

As this proposed development will conform to the Tall City Tomorrow Comprehensive Plan, staff recommends approval of this annexation.

Attachments:

Petition / Metes & Bounds (Exhibit A)
Service Agreement (Exhibit B)
Application
Maps

Morris Williams Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE EXTENDING THE BOUNDARIES OF THE CITY OF MIDLAND, TEXAS, BY ADDING THERETO A CERTAIN AREA ADJOINING THE PRESENT CITY LIMITS, BEING A 2.27-ACRE TRACT OF LAND OUT OF SECTION 22, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS (GENERALLY LOCATED ON THE EAST SIDE OF DUMFRIES ROAD, APPROXIMATELY 3,590 FEET NORTH OF HIGHWAY 158); ORDERING PUBLICATION; AND ORDERING RECORDATION BY THE CITY SECRETARY

WHEREAS, a public hearing before the City Council of the City of Midland, Texas, a home rule municipal corporation, was held in the City Council Chamber on August 9, 2022, during which all interested persons were provided an opportunity to be heard on the proposed annexation of the hereinafter described territory; and

WHEREAS, notice of the public hearing was published on the City of Midland, Texas' Internet website on July 22, 2022, and the notice remained posted until the date of the public hearing; and

WHEREAS, notice of the public hearing was published in a newspaper having general circulation in the City of Midland, Texas, and in the below described territory, on July 22, 2022; and

WHEREAS, all required notices of the proposed annexation and the public hearing were given in accordance with applicable laws; and

WHEREAS, the City of Midland has entered into a written agreement with the owner(s) of the hereinafter described territory for the provision of services in said area;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the following described property adjoining the present boundary lines of the City of Midland, Texas, be and the same is hereby annexed to and incorporated within the boundary of the City of Midland, Texas:

Being a 2.27-acre tract of land out of Section 22, Block 40, T-1-S, T&P RR

Co. Survey, Midland County, Texas, and being more fully described by metes and bounds in the petition for annexation attached hereto as Exhibit "A" and incorporated herein by reference for all legal purposes.

SECTION TWO. That this ordinance shall be published in the official newspaper in the City of Midland, Texas, and the same shall not be effective until after the publication thereof.

SECTION THREE. That the City Secretary is hereby authorized and directed to file a certified copy of this ordinance with the County Clerk of Midland County, Texas, for the purpose of recording in the Deed Records of Midland County, Texas.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2022; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

PETITION FOR ANNEXATION

Dear City of Midland:

As current owner of the tract(s) of land described in Exhibit(s) A (the "Property"), said Exhibit(s) being attached hereto and incorporated herein, Mary Beth Baerten and Gage Baerten ("Owner") submits this petition for annexation and hereby requests that the Property be added to and annexed to the City of Midland.

Signature of Owner or Owner's Authorized Representative

Susan M Hughes
Printed Name

Representative
Title

THE STATE OF Texas §
§
COUNTY OF Midland §

This instrument was acknowledged before me on the 21st day of March 2022 by Susan Mchughes in the capacity herein stated.

MY COMMISSION EXPIRES

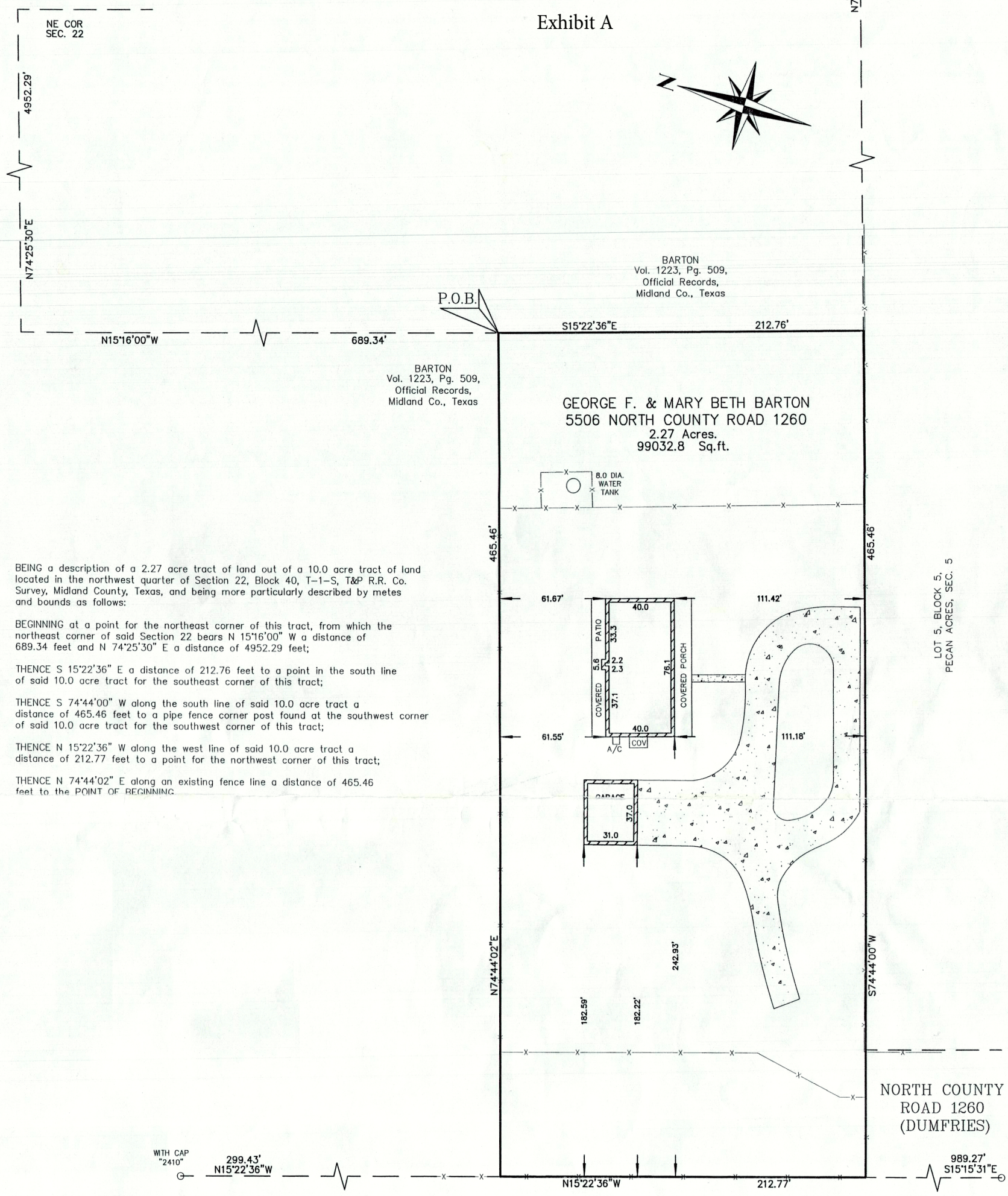
3.9.23

Notary Public, State of Texas

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

* COPYRIGHT 2011
This survey plat is being provided solely for the use of: George F. & Mary Beth Barton Abstract & Title Co., and that no license has been created, express or implied, to copy the survey plat except as is necessary in conjunction with the original transaction dated April 12, 2011, which shall take place within 90 days after the survey was provided.

Exhibit A



BEING a description of a 2.27 acre tract of land out of a 10.0 acre tract of land located in the northwest quarter of Section 22, Block 40, T-1-S, T&P R.R. Co. Survey, Midland County, Texas, and being more particularly described by metes and bounds as follows:

BEGINNING at a point for the northeast corner of this tract, from which the northeast corner of said Section 22 bears N 15°16'00" W a distance of 689.34 feet and N 74°25'30" E a distance of 4952.29 feet;

THENCE S 15°22'36" E a distance of 212.76 feet to a point in the south line of said 10.0 acre tract for the southeast corner of this tract;

THENCE S 74°44'00" W along the south line of said 10.0 acre tract a distance of 465.46 feet to a pipe fence corner post found at the southwest corner of said 10.0 acre tract for the southwest corner of this tract;

THENCE N 15°22'36" W along the west line of said 10.0 acre tract a distance of 212.77 feet to a point for the northwest corner of this tract;

THENCE N 74°44'02" E along an existing fence line a distance of 465.46 feet to the POINT OF BEGINNING

Census Tract: 101.12

This tract is in Flood Zone "X" as shown on the Flood Insurance Rate Map, Dated September 16, 2005 provided by the Federal Emergency Management Agency Flood Map Number: 48329C0064 F

The undersigned does hereby certify that this survey was this day made on the ground of the property legally described hereon and is correct, and that there are no visible discrepancies, conflicts, shortages in area, boundary line conflicts, encroachments, overlapping of improvements, easements or rights-of-way, except as shown hereon, and that said property has access to and from a dedicated roadway.

Dated this the 12th day of April 2011.

Bruce R Pennell
Registered Professional Land Surveyor No. 4170
Date: 04/12/11

(IF SURVEYORS SIGNATURE IS NOT SIGNED IN RED INK, THIS IS NOT AN ORIGINAL DOCUMENT)

PENNELL & MARLOWE LAND SURVEYORS, INC.
PROFESSIONAL LAND SURVEYING
P.O. BOX 51622, MIDLAND, TEXAS 79710
VOICE:(432)570-6256 FAX: (432)682-3262 MOBILE: (432)528-1027

ABSTRACT OFFICE: N/A	G.F. #: N/A	COMMITMENT EFFECTIVE DATE: N/A	
CAD FILE: BRP3167B	DATA FILE: NCR1260	DRAWN BY: MARCY N.	BOOK/PAGE: 1/

STATE OF TEXAS
REGISTERED
BRUCE R. PENNELL
4170
PROFESSIONAL
LAND SURVEYOR

LEGEND
- ● Set 1/2" I.R. W/Cap "RPLS 4170"
- O Fnd. 1/2" I.R.

Basis of Bearings:
SOUTH Line of this Lot

Bearings and Distances Shown
Inside ( ) Indicate Record Information

60 30 0 60

SCALE: 1" = 60'

MIDLAND
Planning Division

Annexation/Initial Zoning Application

Project Number A-22-0030.
Case Number: Z-22-0289

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: George and Mary Beth Barton		Phone (432) 528-6909 Email urtbartgran@yahoo.com	
Address 5506 NC RD 1260	City Midland	State TX	Zip 79707

Property Owner Printed Name: George and Mary Beth Barton		Phone ( ) Email Same	
Address	City	State	Zip

Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name: Susan McHughes		Phone (432) 352-4196 Email susan.mchughes@yahoo.com	
Address 5506 N.C. RD 1260	City Midland	State TX	Zip 79707

Street Address: 5506 N.C. Rd 1260

Legal Description
Lot: Block: Subdivision:

Current Zoning:

Proposed Zone: Agricultural Estate
(List by tracts if more than one district is requested)

Reason for Annexation/Zone Change Request: Future desire for water access

Present Use of Property: Residential & Agricultural

Proposed Use of Property: Residential & Agricultural

How would this annexation/zone change affect the public health, safety and welfare? no impact

Describe how this annexation/zone change will affect adjacent properties: no impact

Submittal and Fees
Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature): Mary Beth Barton	Date: 3/20/22
Applicant (printed): Mary Beth Barton MBarton	
Property Owner (signature): Mary Beth Barton	Date: 3/20/22
Property Owner (printed) : Mary Beth Barton MBarton	

The Annexation/Initial Zoning shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Susan McHughes who, being by me duly sworn, upon oath says: That (s)he is authorized by Mary Beth Barton, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Authorized Agent (*signature*)

Subscribed and sworn to before me, this 21st day of March, 2022, to certify which witness my hand and seal of office.

JEANETTE REYES
Notary ID #130996966
My Commission Expires
February 7, 2025

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☒ Property Owner Authorization	☒ Metes and Bounds (Sealed by Surveyor) missing
☒ Application Fee	☒ Files in Digital Format (PDF/JPEG)
Check # CC	☒ Petition
Received By: KM	Date: MAR 21 2022

****Application will not be considered for scheduling until reviewed by a planner.****

PETITION FOR ANNEXATION

Dear City of Midland:

As current owner of the tract(s) of land described in Exhibit(s) A (the "Property"), said Exhibit(s) being attached hereto and incorporated herein, Mary Beth Beard and Gage Beard ("Owner") submits this petition for annexation and hereby requests that the Property be added to and annexed to the City of Midland.

Signature of Owner or Owner's Authorized Representative

Susan M Hughes
Printed Name

Representative
Title

THE STATE OF Texas §
§
COUNTY OF Midland §

This instrument was acknowledged before me on the 21st day of March 2022 by Susan Mchughes in the capacity herein stated.

MY COMMISSION EXPIRES

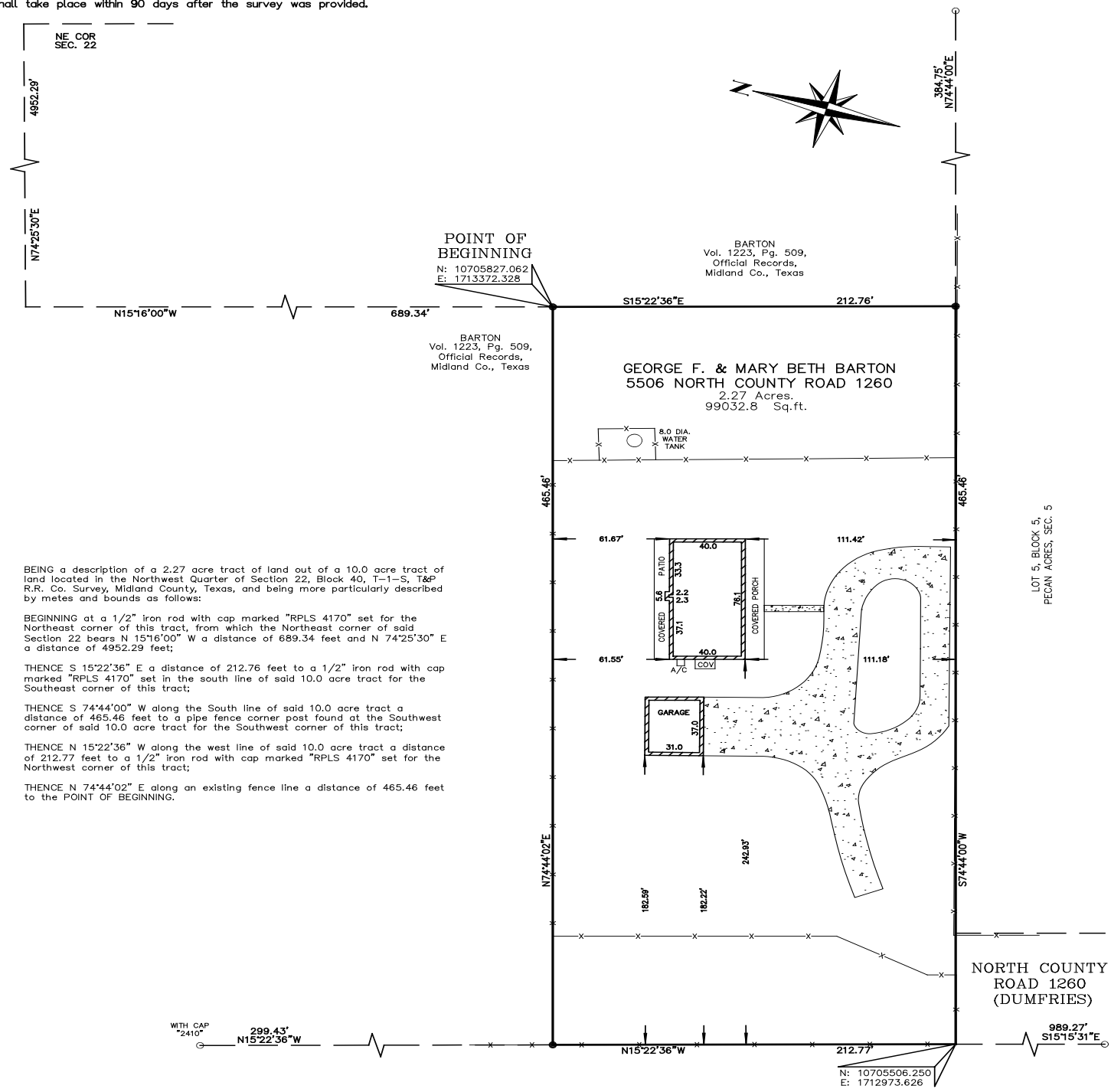
3.9.23

Notary Public, State of Texas

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

EXHIBIT A

COPYRIGHT 2011
This survey plat is being provided solely for the use of: George F. & Mary Beth Barton Abstract & Title Co., and that no license has been created, express or implied, to copy the survey plat except as is necessary in conjunction with the original transaction dated April 12, 2011, which shall take place within 90 days after the survey was provided.



BEING a description of a 2.27 acre tract of land out of a 10.0 acre tract of land located in the Northwest Quarter of Section 22, Block 40, T-1-S, T&P R.R. Co. Survey, Midland County, Texas, and being more particularly described by metes and bounds as follows:

BEGINNING at a 1/2" iron rod with cap marked "RPLS 4170" set for the Northeast corner of this tract, from which the Northeast corner of said Section 22 bears N 15°16'00" W a distance of 689.34 feet and N 74°25'30" E a distance of 4952.29 feet;

THENCE S 15°22'36" E a distance of 212.76 feet to a 1/2" iron rod with cap marked "RPLS 4170" set in the south line of said 10.0 acre tract for the Southeast corner of this tract;

THENCE S 74°44'00" W along the South line of said 10.0 acre tract a distance of 465.46 feet to a pipe fence corner post found at the Southwest corner of said 10.0 acre tract for the Southwest corner of this tract;

THENCE N 15°22'36" W along the west line of said 10.0 acre tract a distance of 212.77 feet to a 1/2" iron rod with cap marked "RPLS 4170" set for the Northwest corner of this tract;

THENCE N 74°44'02" E along an existing fence line a distance of 465.46 feet to the POINT OF BEGINNING.

Census Tract: 101.12

This tract is in Flood Zone "X" as shown on the Flood Insurance Rate Map, Dated September 16, 2005 provided by the Federal Emergency Management Agency Flood Map Number: 48329C0064 F

The undersigned does hereby certify that this survey was this day made on the ground of the property legally described hereon and is correct, and that there are no visible discrepancies, conflicts, shortages in area, boundary line conflicts, encroachments, overlapping of improvements, easements or rights-of-way, except as shown hereon, and that said property has access to and from a dedicated roadway.

Dated this the 12th day of April 2011.

Bruce R Pennell

Registered Professional Land Surveyor No. 4170
Date: 04/12/11 UPDATED TO ADD NORTHINGS AND EASTINGS 04/13/2022

(IF SURVEYORS SIGNATURE IS NOT SIGNED IN RED INK, THIS IS NOT AN ORIGINAL DOCUMENT)

STATE OF TEXAS REGISTERED BRUCE R. PENNELL 4170 PROFESSIONAL LAND SURVEYOR

LEGEND

- ● Set 1/2" I.R. W/Cap "RPLS 4170"
- ○ Fnd. 1/2" I.R.

Basis of Bearings:
SOUTH Line of this Lot

Bearings and Distances Shown
Inside ( ) Indicate Record Information

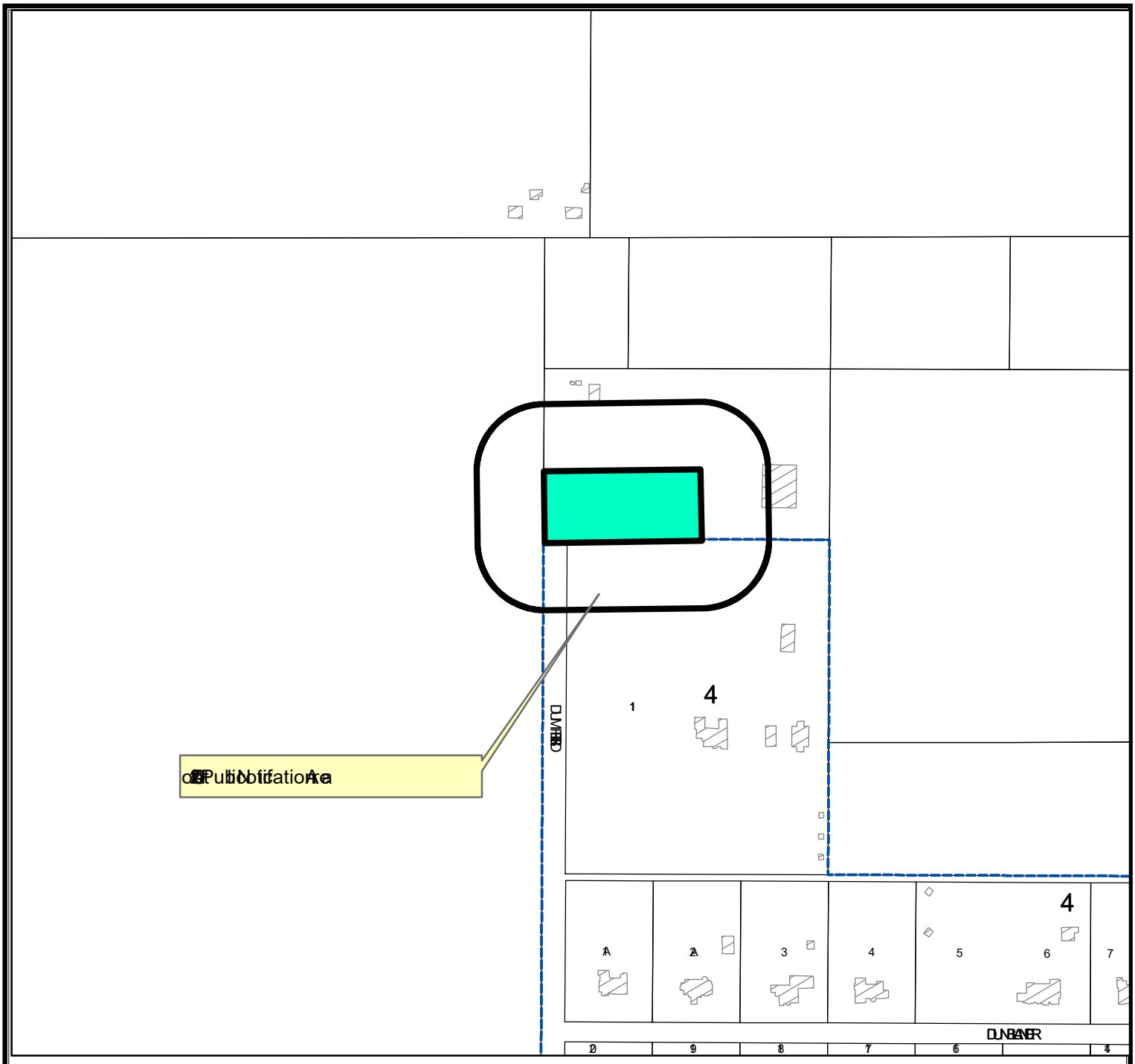
60 30 0 60

SCALE: 1" = 60'

PENNELL & MARLOWE LAND SURVEYORS, INC.
PROFESSIONAL LAND SURVEYING
P.O. BOX 61622, MIDLAND, TEXAS 79710
VOICE:(432)570-6256 FAX: (432)682-3262 MOBILE: (432)528-1027

ABSTRACT OFFICE: N/A	G.F. #: N/A	COMMITMENT EFFECTIVE DATE: N/A	
CAD FILE: BRP3167B	DATA FILE: NCR1260	DRAWN BY: MARCY N.	BOOK/PAGE: 1/

PACKET 27.12 August 9, 2022



LOCATION MAP

A-22-0030 / Z-22-0289 **Scale: 1" = 200'**

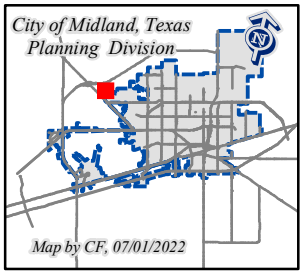
Request for a Zoning Map Amendment, annexation and Zoning of land out of Section 27, Block 38, Township 1 North, Midland County, Texas

Generally located west of the intersection of Dunnam Road and Loop 250 (Extraterritorial Jurisdiction)

27.13

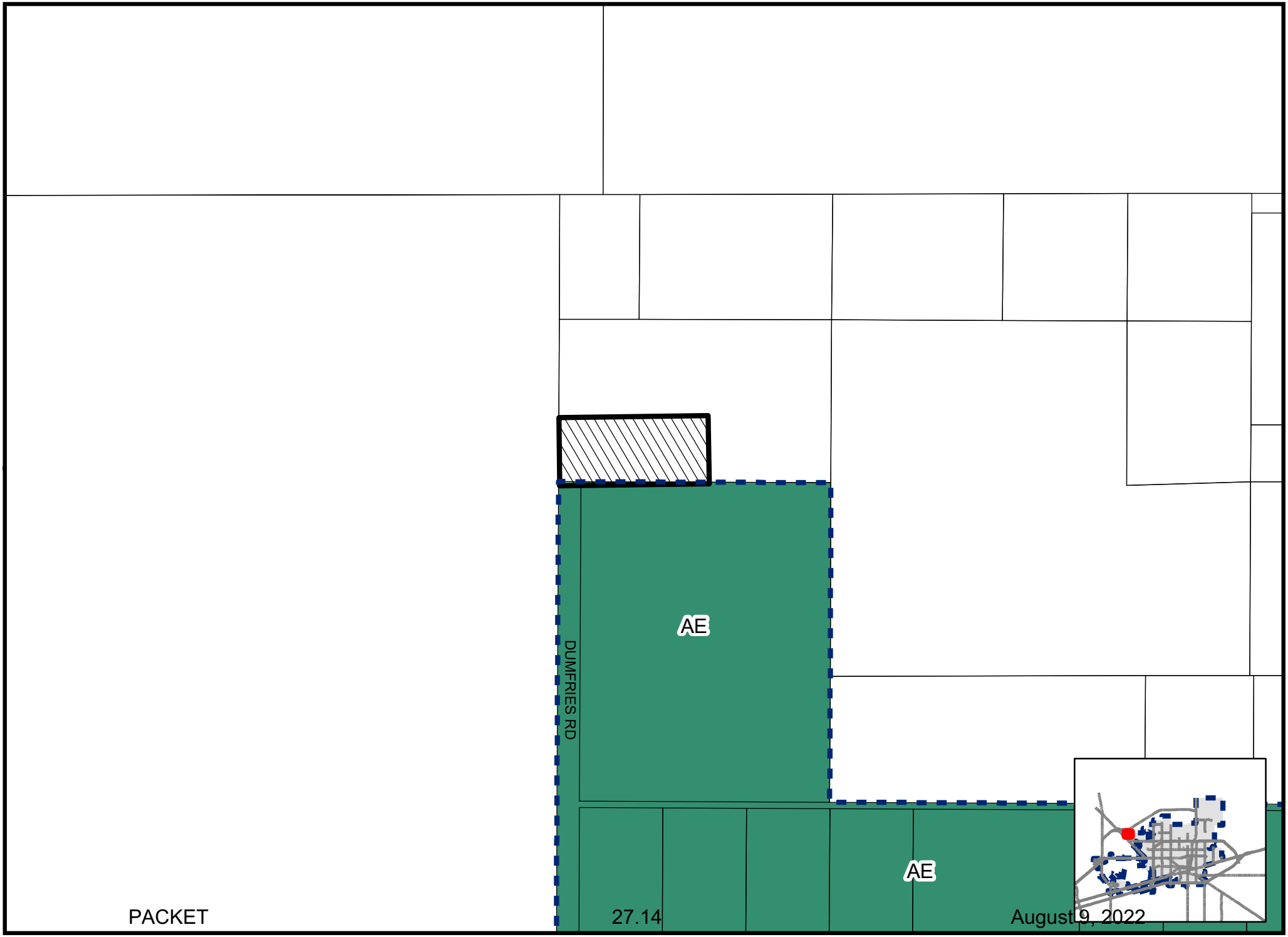
LEGEND

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



August 9, 2022

©THE CITY OF MIDLAND - 2021
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.



Map By ES, 7/8/2022

A-22-0030 / Z-22-0289 **Scale: 1" = 200'**

ZONING MAP

© THE CITY OF MIDLAND - 2021: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.


5506 N COUNTY RD 1000
OLE BARTON
PLACE








N CR-

City Council Meeting

Item Number: 28

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Cole Furqueron,

Subject: **AN ORDINANCE ESTABLISHING THE INITIAL ZONING CLASSIFICATION OF THE AREA INDICATED AS BEING A 2.27-ACRE TRACT OF LAND OUT OF SECTION 22, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, AS AN AE, AGRICULTURAL ESTATE DISTRICT; SAID TRACT BEING GENERALLY LOCATED ON THE EAST SIDE OF DUMFRIES ROAD, APPROXIMATELY 3,590 FEET NORTH OF HIGHWAY 158; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION (DISTRICT: NONE) (DEVELOPMENT SERVICES)**

Purpose:

The applicants, George and Mary Barton, are requesting the initial zoning of 2.27-acre tract of land out of a 10.00-acre tract of land located in the Northwest Quarter of Section 22, Block 40 T-1-S, T&P RR Co. Survey, Midland County, Texas, located on the east side of Dumfries Road, approximately 3,590-feet north of Hwy 158, for the purpose of gaining access to City of Midland utilities. The property is currently being annexed to be AE, Agricultural Estates District.

Recommended City Council Action:

Approve

Fiscal Impact:

This proposal does not have a significant financial impact to the city.

Discussion:

The applicants, George and Mary Barton, are requesting for the initial zoning of annexed land

to AE, Agricultural Estates District in order to gain access to City utilities.

The site is currently in the process of being annexed into City Limits as well as in the process of being platted.

The proposed site plan attached hereto illustrates two (2) buildings consisting of A single-family house and a detached garage, as well as an 8-foot diameter water tank. The total square footage of both the buildings combined is about 4,187 square feet

This case has been circulated to and reviewed by all pertinent City departments for internal review and has received no objections. Their comments are as follows.

Engineering: (Approved)

No objection to zone change. [For the Applicant's information only.]

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For the Applicant's information only.]

Transportation: (Approved)

Site drainage, utilities, driveway access, and traffic circulation may be adjusted during construction drawing review as necessary to receive building permit approval from Engineering and Traffic Operations. [For the Applicant's information only.]

No objection to zone change. [For the Applicant's information only.]

Fire: (Approved)

No objections.

Building Code: (Approved)

ETJ, no jurisdiction

Oil and Gas: (Approved)

Not in the City limits- no oil or gas jurisdiction. If being annexed the following information would apply. Informational No Oil or Gas wells identified within 500 ft. permitted well radius or in the 135 ft. non-permitted well radius of location on plat. Please note if oil & gas wells are not identified or left off of plat, this could prevent receiving city permits for structures.

Planning:

The Future Land Use Map in the Tall City Tomorrow Comprehensive Plan calls for Urban Residential-Large Lot utilization in this area, which emphasizes Single-family housing and

open spaces on large parcels of land.

This request was recommended for approval at the July 18, 2022 Planning and Zoning Commission meeting.

As this proposed initial zoning conforms to the Tall City Tomorrow Comprehensive Plan, staff recommends approval of this initial zoning of AE, Agricultural Estates District subject to condition A.

Conditions:

A. **That the use and development of this property shall conform to the regulations of the AE, Agricultural Estates District.**

Letters of Objection:

As of October July 15, 2021, staff has received no letters of objection to this request.

Attachments:

Petition for Annexation (Exhibit A)
Signed Service Agreement (Exhibit B)
Application
Maps

Morris William Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE ESTABLISHING THE INITIAL ZONING CLASSIFICATION OF THE AREA INDICATED AS BEING A 2.27-ACRE TRACT OF LAND OUT OF SECTION 22, BLOCK 40, T-1-S, T&P RR CO. SURVEY, MIDLAND COUNTY, TEXAS, AS AN AE, AGRICULTURAL ESTATE DISTRICT; SAID TRACT BEING GENERALLY LOCATED ON THE EAST SIDE OF DUMFRIES ROAD, APPROXIMATELY 3,590 FEET NORTH OF HIGHWAY 158; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO THOUSAND DOLLARS ($2,000.00); AND ORDERING PUBLICATION

WHEREAS, notice has been given to all parties in interest and citizens by publication in the official newspaper and otherwise of a public hearing to be held before the City Council on August 9, 2022 (the "Hearing Date"), to consider an amendment to the Zoning District Map of the City of Midland, Texas, so as to establish the initial zoning classification of the property described in Section One hereof as an AE, Agricultural Estate District, as set out in Title XI, Chapter 1 of the City Code of Midland, Texas; and

WHEREAS, such a public hearing was held in the Council Chambers on the Hearing Date, as advertised; and

WHEREAS, after a full hearing, at which all parties in interest and citizens were given an opportunity to be heard; and after considering among other things, the character of the property involved and the surrounding area and its peculiar suitability for particular uses; and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout such municipality, the Council finds it to be in the best interest of the health, safety, morals and general welfare of the City of Midland to amend the Zoning District Map accordingly;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. That the initial zoning classification of the area indicated on Exhibit "A", attached hereto and incorporated herein by reference, is hereby established as

a AE, Agricultural Estate District, and the Zoning District Map of the City of Midland, Texas, is hereby amended to reflect the establishment of this initial zoning classification.

SECTION TWO. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION THREE. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FOUR. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two thousand dollars ($2,000.00).

SECTION FIVE. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the ___day of _____, A.D., 2022; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the ___ day of _____, A.D., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Charles Harrington, Director of Development Services

APPROVED ONLY AS TO FORM:

_____
John Ohnemiller, City Attorney

EXHIBIT "A"

PETITION FOR ANNEXATION

Dear City of Midland:

As current owner of the tract(s) of land described in Exhibit(s) A (the "Property"), said Exhibit(s) being attached hereto and incorporated herein, Mary Beth Bearden and Gage Bearden ("Owner") submits this petition for annexation and hereby requests that the Property be added to and annexed to the City of Midland.

Signature of Owner or Owner's Authorized Representative

Susan M Hughes
Printed Name

Representative
Title

THE STATE OF Texas §
§
COUNTY OF Midland §

This instrument was acknowledged before me on the 21st day of March 2022 by Susan Mchughes in the capacity herein stated.

MY COMMISSION EXPIRES

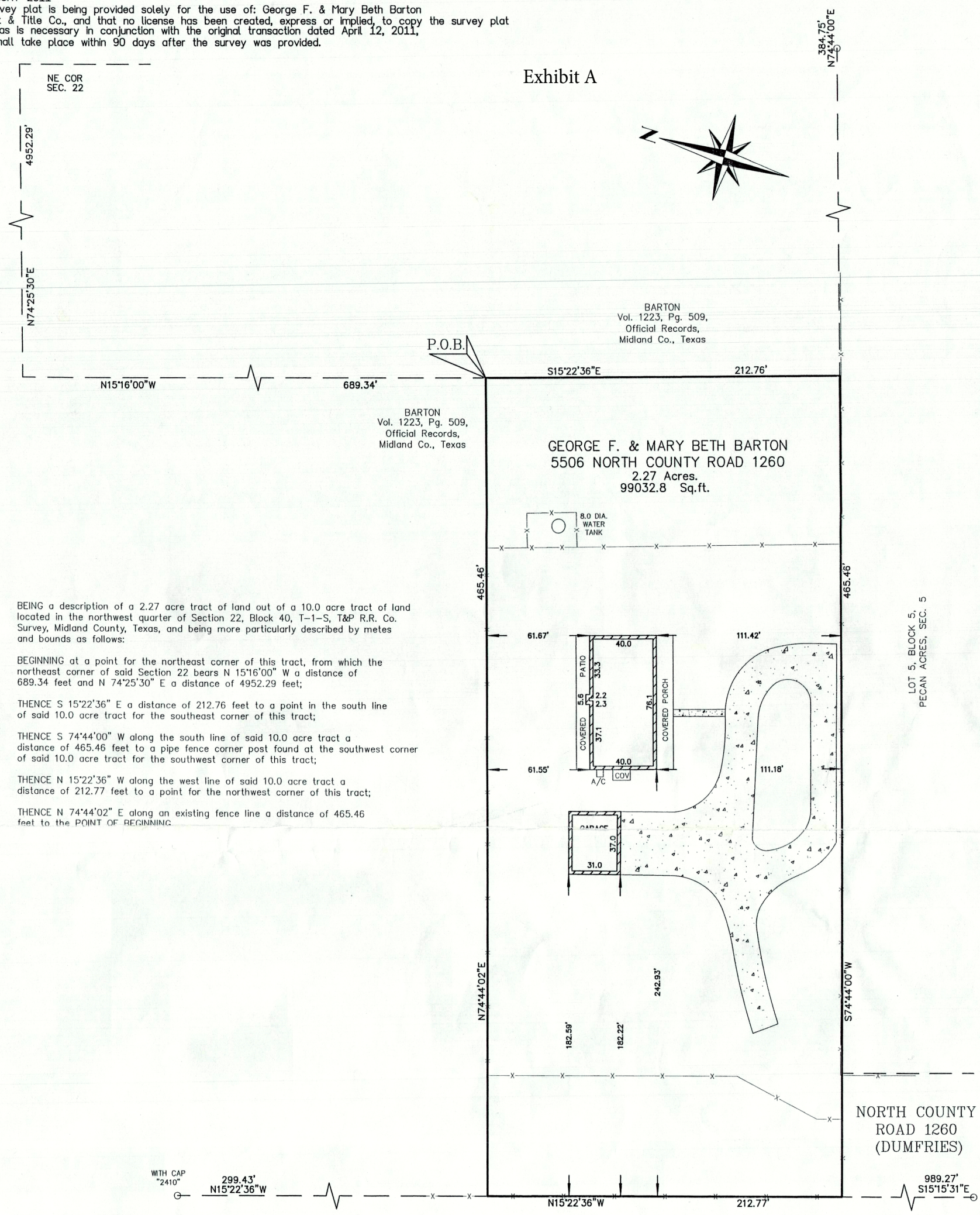
3.9.23

Notary Public, State of Texas

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

* COPYRIGHT 2011
This survey plat is being provided solely for the use of: George F. & Mary Beth Barton Abstract & Title Co., and that no license has been created, express or implied, to copy the survey plat except as is necessary in conjunction with the original transaction dated April 12, 2011, which shall take place within 90 days after the survey was provided.

Exhibit A



BEING a description of a 2.27 acre tract of land out of a 10.0 acre tract of land located in the northwest quarter of Section 22, Block 40, T-1-S, T&P R.R. Co. Survey, Midland County, Texas, and being more particularly described by metes and bounds as follows:

BEGINNING at a point for the northeast corner of this tract, from which the northeast corner of said Section 22 bears N 15°16'00" W a distance of 689.34 feet and N 74°25'30" E a distance of 4952.29 feet;

THENCE S 15°22'36" E a distance of 212.76 feet to a point in the south line of said 10.0 acre tract for the southeast corner of this tract;

THENCE S 74°44'00" W along the south line of said 10.0 acre tract a distance of 465.46 feet to a pipe fence corner post found at the southwest corner of said 10.0 acre tract for the southwest corner of this tract;

THENCE N 15°22'36" W along the west line of said 10.0 acre tract a distance of 212.77 feet to a point for the northwest corner of this tract;

THENCE N 74°44'02" E along an existing fence line a distance of 465.46 feet to the POINT OF BEGINNING

Census Tract: 101.12

This tract is in Flood Zone "X" as shown on the Flood Insurance Rate Map, Dated September 16, 2005 provided by the Federal Emergency Management Agency Flood Map Number: 48329C0064 F

The undersigned does hereby certify that this survey was this day made on the ground of the property legally described hereon and is correct, and that there are no visible discrepancies, conflicts, shortages in area, boundary line conflicts, encroachments, overlapping of improvements, easements or rights-of-way, except as shown hereon, and that said property has access to and from a dedicated roadway.

Dated this the 12th day of April 2011.

Bruce R Pennell
Registered Professional Land Surveyor No. 4170
Date: 04/12/11

(IF SURVEYORS SIGNATURE IS NOT SIGNED IN RED INK, THIS IS NOT AN ORIGINAL DOCUMENT)

PENNELL & MARLOWE LAND SURVEYORS, INC.
PROFESSIONAL LAND SURVEYING
P.O. BOX 51622, MIDLAND, TEXAS 79710
VOICE:(432)570-6256 FAX: (432)682-3262 MOBILE: (432)528-1027

ABSTRACT OFFICE: N/A	G.F. #: N/A	COMMITMENT EFFECTIVE DATE: N/A	
CAD FILE: BRP3167B	DATA FILE: NCR1260	DRAWN BY: MARCY N.	BOOK/PAGE: 1/

STATE OF TEXAS
REGISTERED
BRUCE R. PENNELL
4170
PROFESSIONAL
LAND SURVEYOR

LEGEND

- ● Set 1/2" I.R. W/Cap "RPLS 4170"
- O Fnd. 1/2" I.R.

Basis of Bearings:
SOUTH Line of this Lot

Bearings and Distances Shown
Inside ( ) Indicate Record Information

60 30 0 60

SCALE: 1" = 60'

PETITION FOR ANNEXATION

Dear City of Midland:

As current owner of the tract(s) of land described in Exhibit(s) A (the "Property"), said Exhibit(s) being attached hereto and incorporated herein, Mary Beth Bearden and Gage Barden ("Owner") submits this petition for annexation and hereby requests that the Property be added to and annexed to the City of Midland.

Signature of Owner or Owner's Authorized Representative

Susan M Hughes
Printed Name

Representative
Title

THE STATE OF Texas §
§
COUNTY OF Midland §

This instrument was acknowledged before me on the 21st day of March 2022 by Susan Mchughes in the capacity herein stated.

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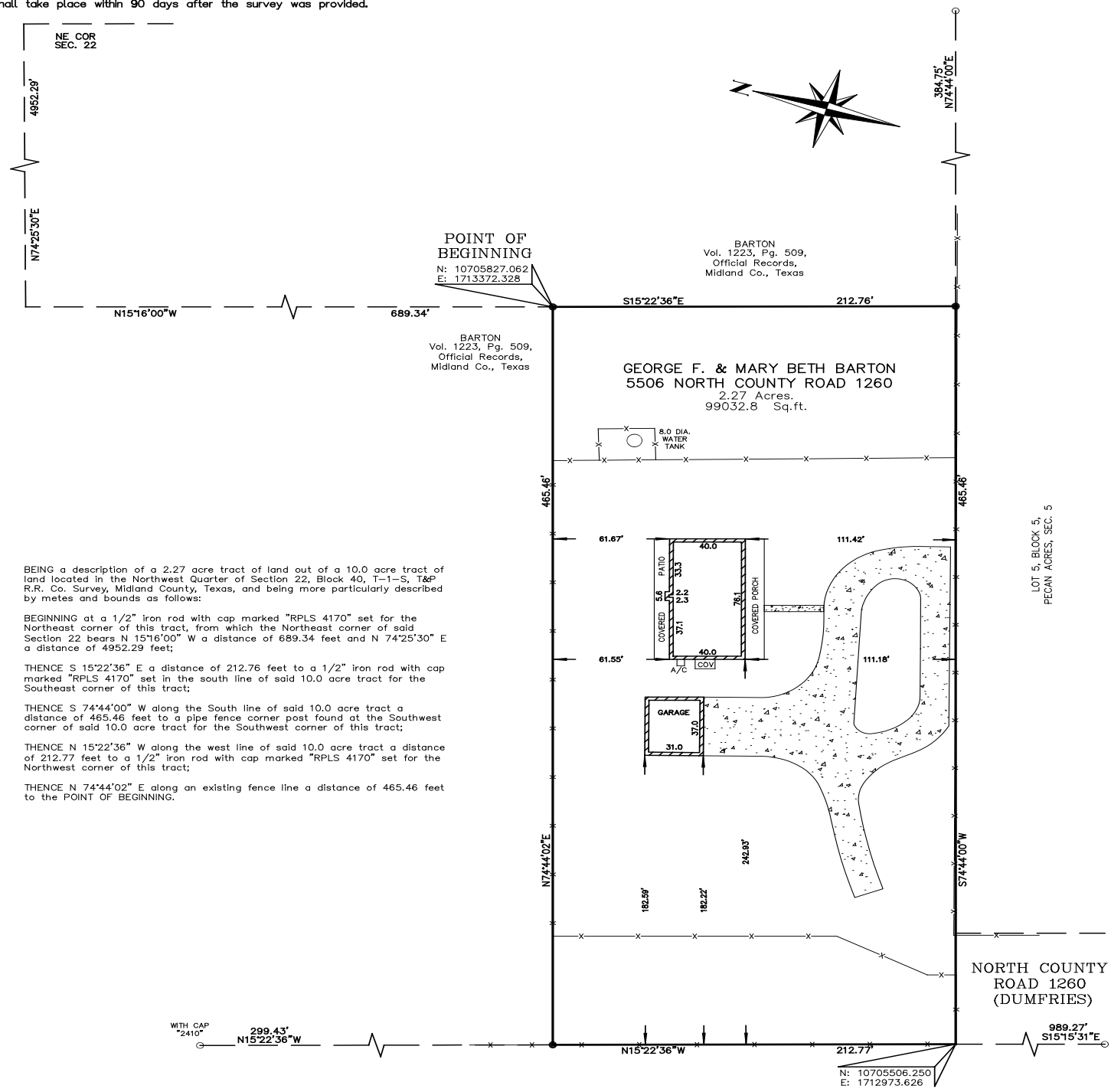
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Notary Public, State of Texas

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

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BEGINNING at a 1/2" iron rod with cap marked "RPLS 4170" set for the Northeast corner of this tract, from which the Northeast corner of said Section 22 bears N 15°16'00" W a distance of 689.34 feet and N 74°25'30" E a distance of 4952.29 feet;

THENCE S 15°22'36" E a distance of 212.76 feet to a 1/2" iron rod with cap marked "RPLS 4170" set in the south line of said 10.0 acre tract for the Southeast corner of this tract;

THENCE S 74°44'00" W along the South line of said 10.0 acre tract a distance of 465.46 feet to a pipe fence corner post found at the Southwest corner of said 10.0 acre tract for the Southwest corner of this tract;

THENCE N 15°22'36" W along the west line of said 10.0 acre tract a distance of 212.77 feet to a 1/2" iron rod with cap marked "RPLS 4170" set for the Northwest corner of this tract;

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Dated this the 12th day of April 2011.

Bruce R Pennell

Registered Professional Land Surveyor No. 4170
Date: 04/12/11 UPDATED TO ADD NORTHINGS AND EASTINGS 04/13/2022
(IF SURVEYORS SIGNATURE IS NOT SIGNED IN RED INK, THIS IS NOT AN ORIGINAL DOCUMENT)

STATE OF TEXAS REGISTERED BRUCE R. PENNELL 4170 PROFESSIONAL LAND SURVEYOR

LEGEND

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- ○ Fnd. 1/2" I.R.

Basis of Bearings:
SOUTH Line of this Lot

Bearings and Distances Shown
Inside ( ) Indicate Record Information

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SCALE: 1" = 60'

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CAD FILE: BRP3167B	DATA FILE: NCR1260	DRAWN BY: MARCY N.	BOOK/PAGE: 1/

SERVICE AGREEMENT

THIS AGREEMENT is made and effective the 10th day of June, 2022, by and between the CITY OF MIDLAND, TEXAS, hereinafter called "CITY," and GEORGE BARTON AND MARY BETH BARTON, hereinafter referred to as "PETITIONER" whether one or more.

WHEREAS, a petition for annexation of a **2.27-acre tract of land out of a 10.0-acre tract of land located in the northwest quarter of Section 22, Block 40, T-1-S, T&P RR Co. Survey, Midland County, Texas**, said tract being more fully described by metes and bounds therein (the "Area"), has been submitted to CITY by PETITIONER, the owner(s) of the land located in the Area, a copy of which is attached hereto as Exhibit "A" and incorporated herein for all purposes; and

WHEREAS, before CITY annexes the Area, CITY and PETITIONER must enter into a written agreement for the provision of services in the Area in accordance with Section 43.0672 of the Local Government Code;

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties agree as follows:

ARTICLE I. PURPOSE

The purpose of this Agreement is (1) to list each service CITY will provide in the Area on the effective date of the annexation, (2) to establish a schedule that includes the period within which CITY will provide each service in the Area that is not provided on the effective date of the annexation, and (3) to establish the duty of PETITIONER to pay fees similar to impact fees in the event that CITY has adopted, or adopts in the future, one or more ordinances establishing impact fees. PETITIONER understands and agrees that CITY is not required to provide a service that is not included in this Agreement. PETITIONER further understands and agrees that the execution of this Agreement does not constitute a promise by CITY to annex the Area and that this Agreement is not a permit for purposes of Chapter 245 of the Local Government Code.

ARTICLE II. TERM

The term of this Agreement shall be one year; provided, however, that if CITY annexes the Area within one year from the effective date, the term of this Agreement shall continue until such time when all services described in this Agreement are provided in the Area, and at such time, the Agreement shall terminate and shall be of no further force or effect except for those provisions that expressly survive termination. If CITY does not annex the Area during the term of this Agreement, this Agreement shall terminate and shall be of no further force or effect, and CITY shall have no duty to provide services to the Area.

ARTICLE III. SERVICES TO BE PROVIDED UPON ANNEXATION

CITY will provide the following services in the Area on the date that the ordinance annexing the Area becomes effective:

A. **Engineering:** CITY's Engineering Services Department will maintain streets, drainage facilities, and rights-of-way in accordance with CITY policies, procedures, and ordinances and applicable laws. PETITIONER understands and agrees that PETITIONER may be required to construct public improvements, including but not limited to (i) roadways adjacent to property located in the Area upon platting and (ii) roadway connections to existing facilities in the Area upon issuance of building permits in accordance with applicable laws and ordinances. PETITIONER understands and agrees that the Area will be included in CITY's service area of CITY's drainage utility.

B. **Utilities:** CITY will provide water services and wastewater collection services, upon platting property in the Area, in accordance with the City Code at rates established by ordinances for such services; provided, however, that no such service shall be provided until the public improvements necessary therefor have been constructed and CITY has approved said improvements. PETITIONER understands and agrees that CITY may require PETITIONER to construct such public improvements in accordance with applicable laws and ordinances.

C. **Development:** CITY's Development Services Department will provide planning, land development, land use, building review and inspection, and code enforcement services in accordance with applicable laws, rules, regulations, and ordinances.

D. **Police:** CITY's Police Department will provide emergency and routine call response, traffic enforcement, and law enforcement services in the Area.

E. **Fire:** CITY's Fire Department will provide emergency service for fire protection services and emergency medical services.

F. **Community Services:** CITY's Community Services Department will provide access to services and programs that may be offered by the Health and Senior Services Division, services and programs that may be offered by Animal Services Division, and access to City-owned parks.

G. **Solid Waste:** CITY's Solid Waste Department will provide residential garbage pickup service only. PETITIONER understands and agrees that CITY will not provide garbage pickup services to new commercial developments.

Regarding the services described above, PETITIONER understands and agrees that CITY will provide a level of services that is comparable to the level of services available in other parts of the City of Midland with topography, land use, and population density similar to those reasonably contemplated or projected for the Area. PETITIONER understands and acknowledges that any CITY departments or divisions identified above may change names or be reorganized. Any reference to a specific CITY department or division also includes any subsequent CITY department or division that will provide the same or similar services.

ARTICLE IV. IMPACT FEES

A. **Fees to be assessed and collected.** Except as otherwise described herein, if CITY has adopted, or adopts in the future, one or more ordinances establishing impact fees in accordance with Chapter 395 of the Local Government Code, CITY shall assess and collect fees associated with the development of the Area as described for impact fees in the applicable impact fee ordinance(s) (the "Fees").

B. **Service areas.** For purposes of assessing and collecting Fees for water and wastewater under this Agreement, the Area is deemed to be located within CITY's capital improvements plan service area therefor. For the purpose of assessing and collecting Fees for roadways under this Agreement, the Area is deemed to be located in CITY's capital improvements plan roadway service area(s) immediately adjacent thereto; provided, however, that if the Area is not located immediately adjacent to a roadway service area and is located immediately adjacent to a tract of land that is associated with an agreement regarding fees similar to the Fees in this Agreement, the Area is deemed to be located in the roadway service area(s) specified in such similar agreement associated with the adjacent tract of land.

C. **Capital improvements and facility expansions.** For purposes of this Agreement, a capital improvement or facility expansion that will serve the Area shall be deemed to be included in CITY's capital improvements plan if:

   a. said capital improvement or facility expansion is substantially similar to a type of capital improvement or facility expansion identified in CITY's capital improvements plan; or

   b. said capital improvement or facility expansion is an extension of a capital improvement or facility expansion identified in CITY's capital improvements plan.

D. **Time of assessment.** Fees shall be assessed at the time of recordation of a final plat of any portion of the Area, at the time the Area is annexed, or on the effective date(s) of the applicable impact fee ordinance(s), whichever is later.

E. **Time of collection.** CITY shall collect the Fees from PETITIONER at the time of issuance of a building permit. PETITIONER acknowledges and agrees that no building permit or certificate of occupancy shall be issued until PETITIONER has paid the applicable Fees.

F. **Amendment to land use assumptions, capital improvements plan, or impact fees.** Notwithstanding any provision in this Agreement to the contrary, if CITY amends its land use assumptions, capital improvements plan, or impact fees such that PETITIONER would be required to pay impact fees, CITY shall assess and PETITIONER shall pay the applicable impact fees in accordance with the applicable impact fee ordinance(s), as amended; provided, however, that to the extent CITY assesses applicable Fees for service units under this Agreement, PETITIONER shall pay such Fees in accordance with this Agreement and shall not be required to pay the applicable impact fees for the same service units.

G. **Article to survive termination.** If CITY annexes the Area within one year from the

effective date, the provisions of this Article shall survive termination of this Agreement.

ARTICLE V. GOVERNMENTAL IMMUNITY

By executing this agreement CITY is not waiving its right of governmental immunity. CITY is retaining its immunity from suit. CITY is not granting consent to be sued by legislative resolution or action.

THERE IS NO WAIVER OF GOVERNMENTAL IMMUNITY. THE PROVISIONS OF THIS ARTICLE SHALL SURVIVE TERMINATION OF THIS AGREEMENT.

ARTICLE VI. RELEASE

NOTWITHSTANDING ANY OTHER PROVISIONS, PETITIONER HEREBY RELEASES, ACQUITS, RELINQUISHES AND FOREVER DISCHARGES CITY, CITY'S EMPLOYEES AND OFFICERS, FROM ANY AND ALL DEMANDS, CLAIMS, DAMAGES, OR CAUSES OF ACTION OF ANY KIND WHATSOEVER WHICH PETITIONER HAS OR MIGHT HAVE IN THE FUTURE, INCLUDING BUT NOT LIMITED TO BREACH OF AGREEMENT, QUANTUM MERUIT, CLAIMS UNDER THE DUE PROCESS AND TAKINGS CLAUSES OF THE TEXAS AND UNITED STATES CONSTITUTIONS, TORT CLAIMS, CITY'S NEGLIGENCE, OR CLAIMS UNDER CHAPTER 395 OF THE TEXAS LOCAL GOVERNMENT CODE. THE PROVISIONS OF THIS ARTICLE SHALL SURVIVE TERMINATION OF THIS AGREEMENT.

ARTICLE VII. ATTORNEYS' FEES

In the event of any conflict between the parties hereto such that either party brings or commences any legal action or proceeding related to this Agreement, including but not limited to any action pursuant to the provisions of the Texas Uniform Declaratory Judgments Act (Tex. Civ. Prac. & Rem. Code §37.001, et seq., as amended), the parties hereto agree to waive any and all rights to recovery of attorneys' fees to which the prevailing party might otherwise be entitled.

BY EXECUTING THIS AGREEMENT, THE PARTIES AGREE TO WAIVE AND DO HEREBY KNOWINGLY, CONCLUSIVELY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY CLAIM EITHER PARTY HAS OR MAY HAVE IN THE FUTURE AGAINST THE OTHER PARTY, SPECIFICALLY AND SOLELY REGARDING THE AWARD OF ATTORNEYS' FEES, WHICH ARE IN ANY WAY RELATED TO THE AGREEMENT, OR THE CONSTRUCTION, INTERPRETATION OR BREACH OF THE AGREEMENT. THE PARTIES SPECIFICALLY AGREE THAT IF A PARTY BRINGS OR COMMENCES ANY LEGAL ACTION OR PROCEEDING

RELATED TO THIS AGREEMENT, THE CONSTRUCTION, INTERPRETATION, VALIDITY OR BREACH OF THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO ANY ACTION PURSUANT TO THE PROVISIONS OF THE TEXAS UNIFORM DECLARATORY JUDGMENTS ACT (TEXAS CIVIL PRACTICE AND REMEDIES CODE SECTION 37.001, ET. SEQ., AS AMENDED), OR CHAPTER 271 OF THE TEXAS LOCAL GOVERNMENT CODE, THE PARTY BRINGING THE ACTION AGREES TO ABANDON, WAIVE AND RELINQUISH ANY AND ALL RIGHTS TO THE RECOVERY OF ATTORNEYS' FEES TO WHICH THE PARTY MIGHT OTHERWISE BE ENTITLED.

THE PARTIES AGREE THAT THIS IS THE VOLUNTARY AND INTENTIONAL RELINQUISHMENT AND ABANDONMENT OF A PRESENTLY EXISTING KNOWN RIGHT. EACH PARTY ACKNOWLEDGES THAT IT UNDERSTANDS ALL TERMS AND CONDITIONS OF THE AGREEMENT. THE PARTIES FURTHER ACKNOWLEDGE AND AGREE THAT THERE WAS AND IS NO DISPARITY OF BARGAINING POWER BETWEEN CITY AND PETITIONER. THIS SECTION SHALL NOT BE CONSTRUED OR INTERPRETED AS A WAIVER OF SOVEREIGN IMMUNITY.

THE PROVISIONS OF THIS ARTICLE SHALL SURVIVE TERMINATION OF THIS AGREEMENT. PETITIONER AND CITY ARE RELYING ON THEIR OWN JUDGMENT. EACH PARTY HAD THE OPPORTUNITY TO DISCUSS THIS AGREEMENT WITH LEGAL COUNSEL PRIOR TO ITS EXECUTION.

ARTICLE VIII. GENERAL PROVISIONS

A. **Governing law and venue.** This Agreement shall be governed by the laws of the State of Texas. All performance made pursuant to this Agreement shall be deemed to have occurred in Midland County, Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this Agreement or the performance of this Agreement shall be in Midland County, Texas. The obligations and undertakings of each of the parties to this Agreement shall be deemed to have occurred in Midland County, Texas. This Agreement shall be governed by, interpreted, enforced and construed under the laws of the State of Texas. The laws of the State of Texas shall govern, construe and enforce all the rights and duties of the parties, including but not limited to tort claims and any and all contractual claims or disputes, arising from or relating in any way to the subject matter of this Agreement, without regard to conflict of laws and rules that would direct application of the laws of another jurisdiction. The provisions of this Article VIII.A. shall survive termination of this Agreement.

B. **Notice.** Any notice or demand that shall be made regarding this Agreement, shall be made in writing and delivered either in person or by certified or registered mail. Notice by mail shall be complete upon deposit of the paper, postage prepaid, in a post office or official depository under the care and custody of the United States Postal Service addressed as

follows:

If to CITY: City Manager's Office
P.O. Box 1152
Midland, Texas 79702

If to PETITIONER: George Barton and Mary Beth Barton
5506 North County Road 1260
Midland, Texas 79707

The parties hereto may change the above-designated addresses by giving notice pursuant to the terms of this Section.

C. **Severability.** In case any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, this invalidity, illegality, or unenforceability shall not affect any other provision of the Agreement, and this Agreement shall be construed as if the invalid, illegal, or unenforceable provision had never been contained herein.

D. **Use of language.** Words in the singular shall be held to include the plural, unless the context otherwise requires.

E. **Amendments, modifications, alterations.** No amendment, modification, or alteration of the terms of this Agreement shall be binding unless it is in writing, dated subsequent to the date of this Agreement, and duly executed by the parties to this Agreement.

F. **Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall be deemed as original, and all of which shall constitute one and the same instrument.

G. **Notice of alleged breach; statutory prerequisites.** As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Agreement, PETITIONER or PETITIONER'S legal representative, shall give the City Manager, or any other reasonable official of CITY, notice in writing (consisting of one original and seven copies of notice attached to a copy of this Agreement) of such damages, duly verified, within one-hundred fifty (150) days after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which PETITIONER will settle, the physical and mailing addresses of PETITIONER at the time and date the claim was presented and the physical and mailing addresses of PETITIONER for the six months immediately preceding the occurrence of such damages, and the names and addresses of the witnesses upon whom PETITIONER relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except CITY from any liability whatsoever. CITY is under no obligation to provide notice to PETITIONER that PETITIONER'S notice is insufficient. CITY reserves the right to request reasonable additional information regarding the claim. Said additional information shall be

supplied within thirty (30) days after receipt of notice.

The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, PETITIONER'S failure to comply with the requirements herein shall perpetually bar PETITIONER'S claim for damages under Chapter 271 of the Texas Local Government Code and Section 311.034 of the Texas Government Code, regardless of whether CITY has actual or constructive notice or knowledge of said claim or alleged damages. The provisions of this Article VIII.G. shall survive termination of this agreement. **PETITONER AGREES THAT THE REQUIREMENTS OF THIS ENTIRE AGREEMENT ARE REASONABLE.**

H. **Covenants run with the land.** The provisions of this Agreement are covenants that run with the land located in the Area. CITY and PETITIONER agree that this Agreement may be recorded in the deed records of the county in which the Area is located. CITY and PETITIONER acknowledge and agree that this Agreement is binding upon CITY and PETITIONER and their respective successors, executors, heirs, and assigns, as applicable. The provisions of this Article VIII.H. shall survive termination of this Agreement.

EXECUTED the day and year first above mentioned.

THE CITY OF MIDLAND, TEXAS

By: _____
Robert Patrick, City Manager

ATTEST

_____
Amy M. Turner, City Secretary

APPROVED ONLY AS TO FORM

_____ First Asst City Atty for
John Ohnemiller, City Attorney

PETITIONER:

By: _____
George Barton

By: _____
Mary Beth Barton

STATE OF Texas §

§

COUNTY OF Midland §

BEFORE ME, the undersigned authority, on this 7th day of June, 2022, personally appeared George Barton, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 7th day of June, 2022.

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

_____
Notary Public, State of Texas

STATE OF Texas §

§

COUNTY OF Midland §

BEFORE ME, the undersigned authority, on this 7th day of June, 2022, personally appeared Mary Beth Barton, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that she executed the same for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 7th day of June, 2022.

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

_____
Notary Public, State of Texas

Exhibit "A" to Service Agreement

PETITION FOR ANNEXATION

Dear City of Midland:

As current owner of the tract(s) of land described in Exhibit(s) A (the "Property"), said Exhibit(s) being attached hereto and incorporated herein, Mary Beth Bertrand Gayle ("Owner") submits this petition for annexation and hereby requests that the Property be added to and annexed to the City of Midland.

Signature of Owner or Owner's Authorized Representative

Susan M Hughes
Printed Name

Representative
Title

THE STATE OF Texas §
§
COUNTY OF Midland §

This instrument was acknowledged before me on the 21st day of March 2022 by Susan Mchughes in the capacity herein stated.

MY COMMISSION EXPIRES

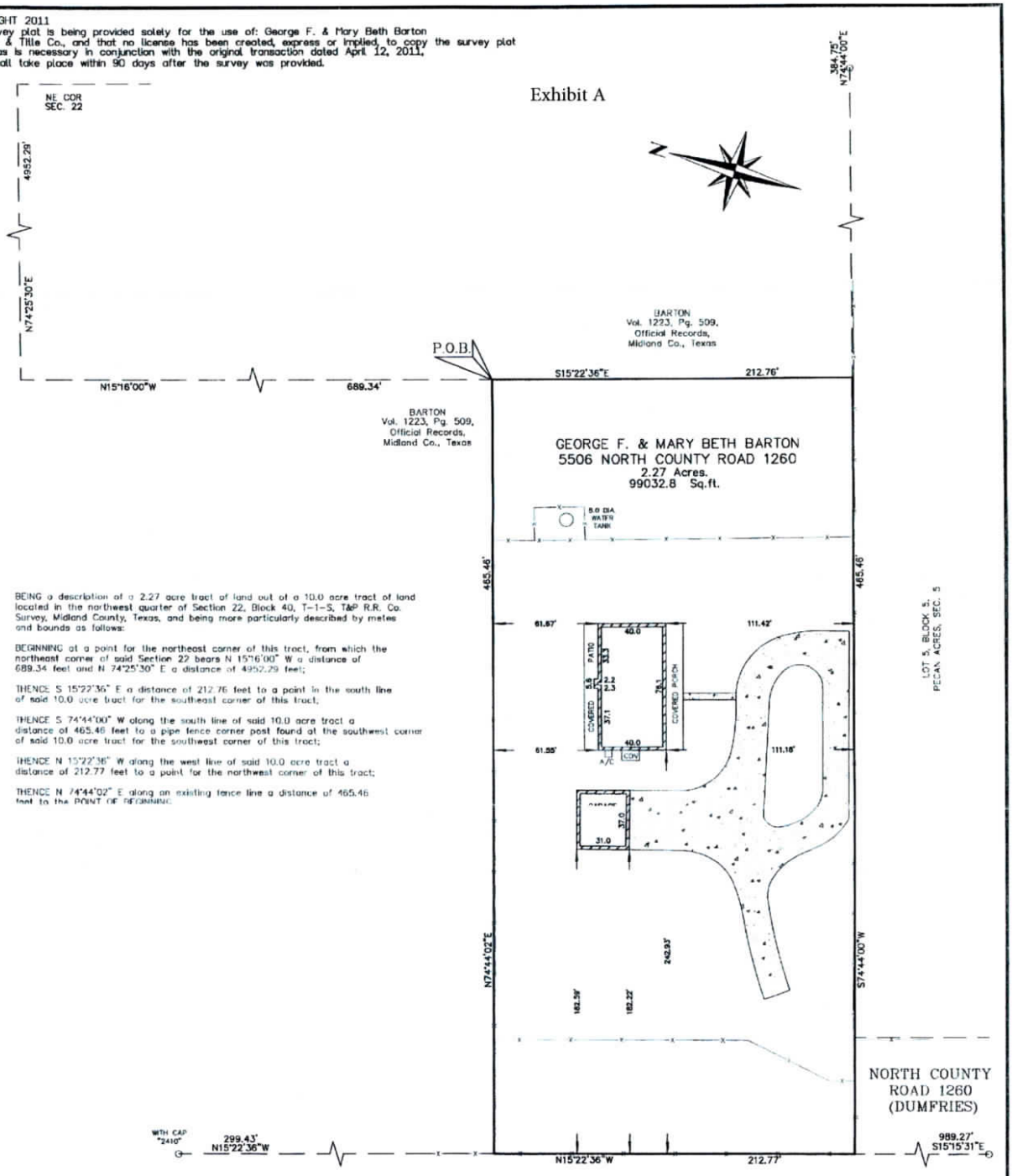
3.9.23

Notary Public, State of Texas

DALIA SALINAS
My Notary ID # 128541568
Expires March 9, 2023

COPYRIGHT 2011
This survey plat is being provided solely for the use of: George F. & Mary Beth Barton Abstract & Title Co., and that no license has been created, express or implied, to copy the survey plat except as is necessary in conjunction with the original transaction dated April 12, 2011, which shall take place within 90 days after the survey was provided.

Exhibit A



BEING a description of a 2.27 acre tract of land out of a 10.0 acre tract of land located in the northwest quarter of Section 22, Block 40, T-1-S, T&P R.R. Co. Survey, Midland County, Texas, and being more particularly described by metes and bounds as follows:

BEGINNING at a point for the northeast corner of this tract, from which the northeast corner of said Section 22 bears N 15°16'00" W a distance of 689.34 feet and N 74°25'30" E a distance of 4952.29 feet;

THENCE S 15°22'36" E a distance of 212.76 feet to a point in the south line of said 10.0 acre tract for the southeast corner of this tract;

THENCE S 74°44'00" W along the south line of said 10.0 acre tract a distance of 465.46 feet to a pipe fence corner post found at the southwest corner of said 10.0 acre tract for the southeast corner of this tract;

THENCE N 15°22'36" W along the west line of said 10.0 acre tract a distance of 212.77 feet to a point for the northwest corner of this tract;

THENCE N 74°44'02" E along an existing fence line a distance of 465.46 feet to the POINT OF BEGINNING.

Census Tract: 101.12

This tract is in Flood Zone "X" as shown on the Flood Insurance Rate Map, Dated September 16, 2005 provided by the Federal Emergency Management Agency Flood Map Number: 48329C0064 F

The undersigned does hereby certify that this survey was this day made on the ground of the property legally described hereon and is correct, and that there are no visible discrepancies, conflicts, shortages in area, boundary line conflicts, encroachments, overlapping of improvements, easements or rights-of-way, except as shown hereon, and that said property has access to and from a dedicated roadway.

Dated this the 12th day of April 2011.

Registered Professional Land Surveyor No. 4170
Date: 04/12/11

(IF SURVEYORS SIGNATURE IS NOT SIGNED IN RED INK, THIS IS NOT AN ORIGINAL DOCUMENT)

PENNELL & MARLOWE LAND SURVEYORS, INC.
PROFESSIONAL LAND SURVEYING
P.O. BOX 51622, MIDLAND, TEXAS 79710
VOICE:(432)570-6256 FAX: (432)682-3262 MOBILE: (432)528-1027

ABSTRACT:	G.F. #: N/A	COMMITMENT EFFECTIVE DATE: N/A	
CAD FILE: BRP31678	DATA FILE: NCR1260	DRAWN BY: MARCY N.	BOOK/PAGE: 1/

STATE OF TEXAS
REGISTERED
BRUCE R. PENNELL
4170
PROFESSIONAL
LAND SURVEYOR

LEGEND
● Set 1/2" I.R. W/Cap "RPLS 4170"
O Fnd. 1/2" I.R.

Basis of Bearings:
SOUTH Line of this Lot

Bearings and Distances Shown
Inside ( ) Indicate Record Information

60 30 0 60

SCALE: 1" = 60'

MIDLAND Planning Division

Annexation/Initial Zoning Application

Project Number A-22-0030.

Case Number: Z-22-0289

Applicant *(if acting as Agent, see affidavit on page 2)* Printed Name: George and Mary Beth Barton		Phone (432) 528-6909 Email urtbartgran@yahoo.com	
Address 5506 NC RD 1260	City Midland	State TX	Zip 79707

Property Owner Printed Name: George and Mary Beth Barton		Phone ( ) Email Same	
Address	City	State	Zip

Representative *(if different from Applicant or Property Owner)* Firm: _____ Printed Name: Susan McHughes		Phone (432) 352-4196 Email susan.mchughes@yahoo.com	
Address 5506 N.C. RD 1260	City Midland	State TX	Zip 79707

Street Address: 5506 N.C. Rd 1260

Legal Description
Lot: Block: Subdivision:

Current Zoning:

Proposed Zone: Agricultural Estate
(List by tracts if more than one district is requested)

Reason for Annexation/Zone Change Request: Future desire for water access

Present Use of Property: Residential & Agricultural

Proposed Use of Property: Residential & Agricultural

How would this annexation/zone change affect the public health, safety and welfare? no impact

Describe how this annexation/zone change will affect adjacent properties: no impact

Submittal and Fees

Items to be submitted with this application form:

- Application Fee – Payable to the 'City of Midland'
- Dimensioned Site Plan
- Digital Copies of Site Plan (PDF/JPEG)

Signature *(by property owner only – authorized agent must sign affidavit below)*	
Applicant (signature): Mary Beth Barton	Date: 3/20/22
Applicant (printed): Mary Beth Barton MBarton	
Property Owner (signature): Mary Beth Barton	Date: 3/20/22
Property Owner (printed) : Mary Beth Barton MBarton	

The Annexation/Initial Zoning shall be considered officially received in the Planning office only when it has been submitted in full compliance with the provisions of Section 212 of the Texas Local Government Code and the Zoning Code of Ordinances of the City of Midland and when such required items for the application are also received.

All materials, including exhibits, submitted in support of an application, or displayed during a public hearing, shall remain the property of the City of Midland.

If an agent is authorized by the property owner to file and execute the application on behalf of the property owner, the agent must complete the affidavit below.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Susan McHughes who, being by me duly sworn, upon oath says: That (s)he is authorized by Mary Beth Barton, the owner of the above described property, to fully represent him/her in this application and that (s)he had the legal right, power and authority to sign said owner's name hereto as his/her attorney in fact.

Authorized Agent (*signature*)

Subscribed and sworn to before me, this 21st day of March, 2022, to certify which witness my hand and seal of office.

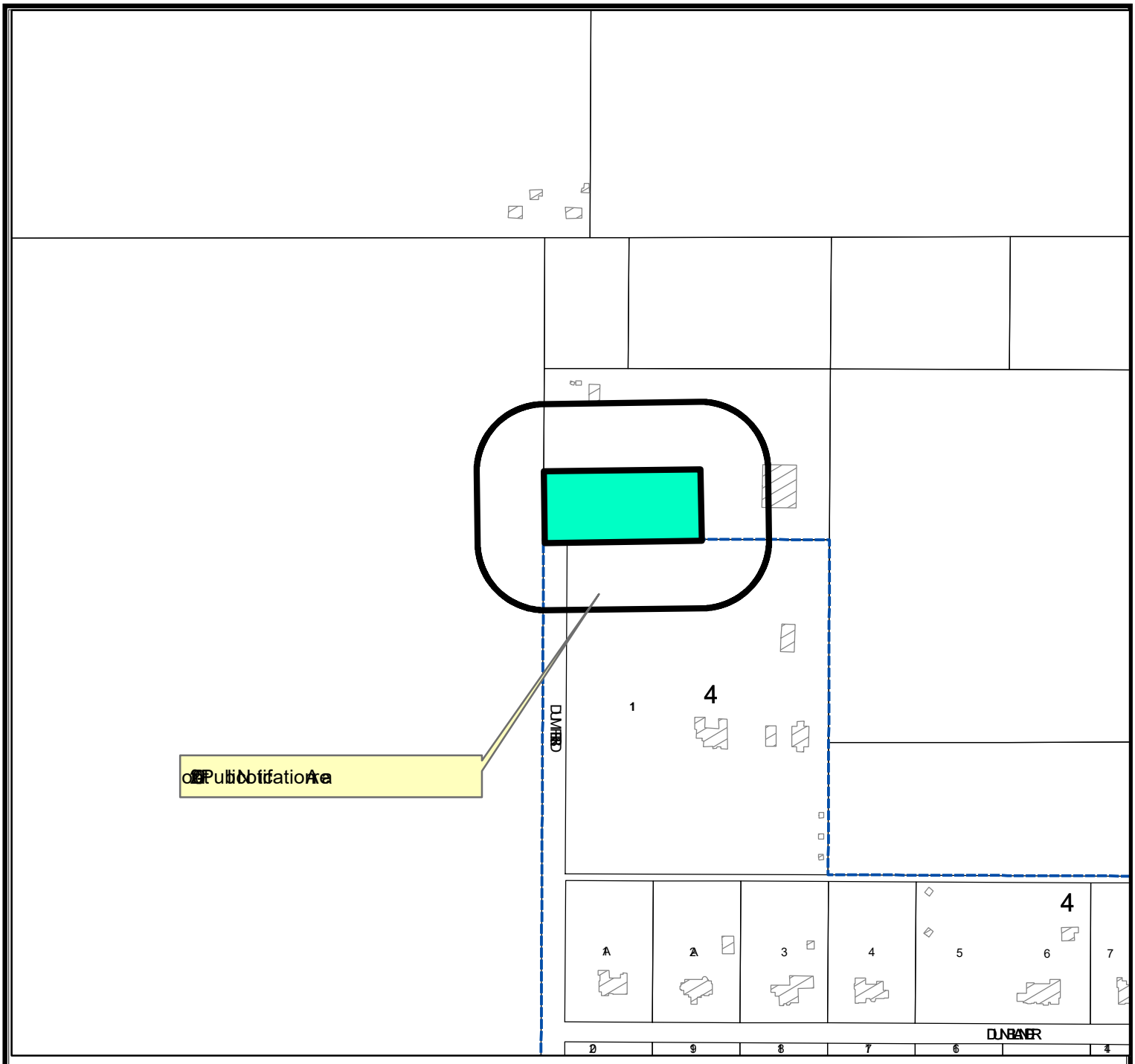
JEANETTE REYES
Notary ID #130996966
My Commission Expires
February 7, 2025

NOTARY PUBLIC, MIDLAND COUNTY, TEXAS

FOR OFFICE USE ONLY

☒ Property Owner Authorization	☒ Metes and Bounds (Sealed by Surveyor) missing
☒ Application Fee	☒ Files in Digital Format (PDF/JPEG)
Check # CC	☒ Petition
Received By: KM	Date: MAR 21 2022

****Application will not be considered for scheduling until reviewed by a planner.****



LOCATION MAP

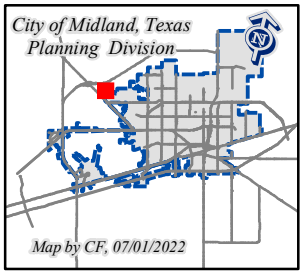
Z-22-0289 **Scale: 1" = 200'**

A request by George and Mary Barton, for the Initial zoning to AE, Agricultural Estates Distict of a 2.27-acre tract of land out of a 10.00-acre tract of land located in the NW/4 of Section 22, Block 40 T-1-S, T&P RR Co. Survey, Midland County, Texas

Generally located on the east side of Dumfries Road, approximately 3,590-feet north of Hwy 158 (Extraterritorial Jurisdiction)

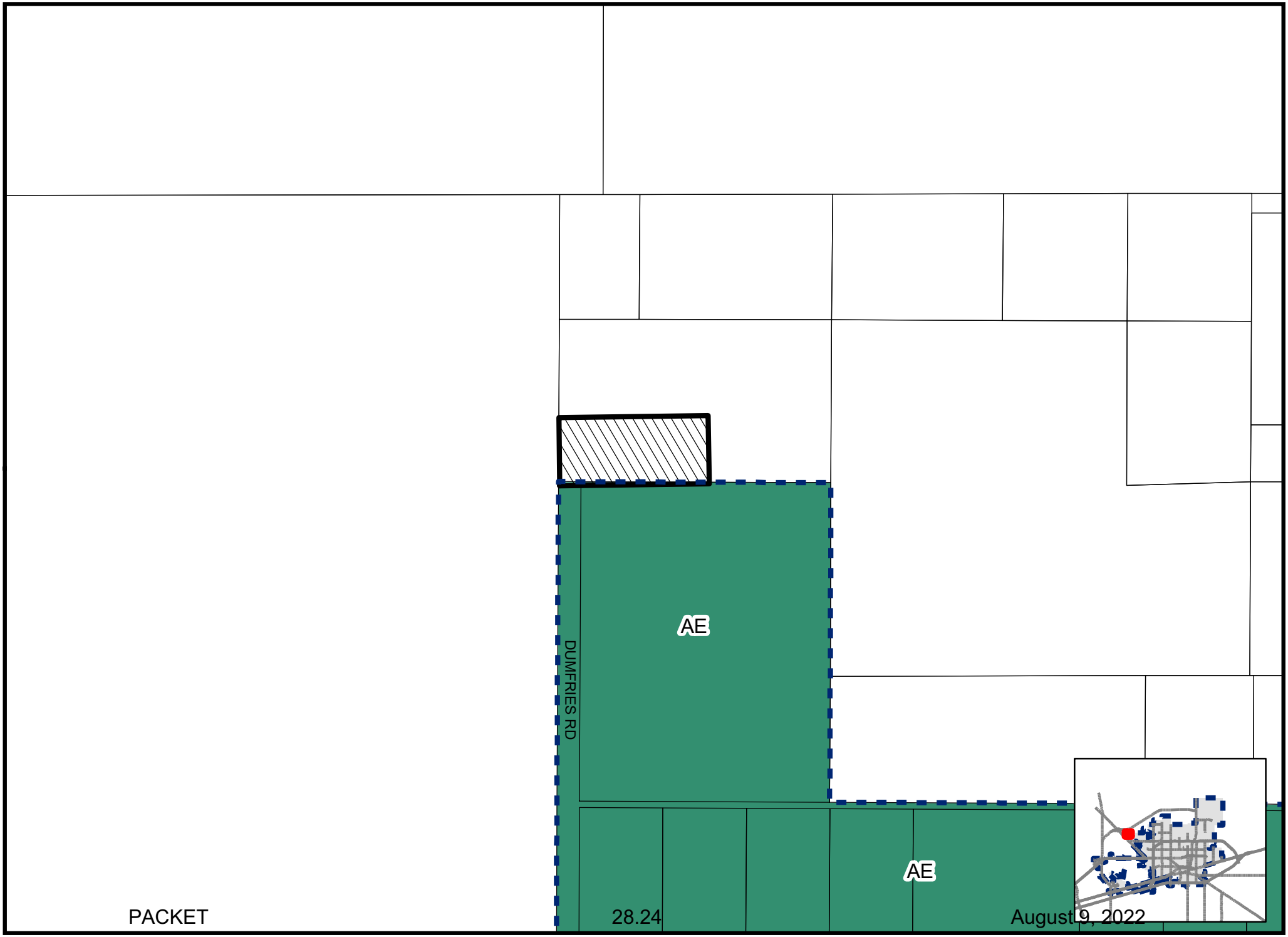
L E G E N D

- CITY LIMITS
- PARCEL
- PRIVATE BLDGS



©THE CITY OF MIDLAND - 2021
THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN.
THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.

August 9, 2022



Map By ES, 7/8/2021

Z-22-0289

Scale: 1" = 200'

ZONING MAP

© THE CITY OF MIDLAND - 2021: THIS DATA IS NOT A SUBSTITUTION FOR A SURVEY PRODUCT, NOR IS IT DESIGNED TO BE USED AS A PRIMARY TOOL IN PERMITTING OR OTHER DECISIONS BASED SOLELY ON THE INFORMATION CONTAINED HEREIN. THE CITY OF MIDLAND SHALL NOT BE RESPONSIBLE FOR ANY DECISIONS BASED UPON THE USE OF THIS DATA.


5506 N COUNTY RD 1000
OLE BARTON
PLACE








N CR-

City Council Meeting

Item Number: 29

Meeting Date: August 9, 2022

To: City Council / City Manager

From: Gabe McClelland,

Subject: AN ORDINANCE ESTABLISHING INTERSECTION STOPS AT VARIOUS LOCATIONS WITHIN THE CITY OF MIDLAND, TEXAS; AUTHORIZING AND DIRECTING THE TRAFFIC ENGINEER TO INSTALL APPROPRIATE SIGNS AND MARKINGS AT THE DESIGNATED LOCATIONS; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO HUNDRED DOLLARS ($200.00); AND ORDERING PUBLICATION (DISTRICT: ALL) (ENGINEERING SERVICES)

Purpose:

Consider an ordinance establishing intersection stops at various locations within the City of Midland, Texas; authorizing and directing the Traffic Engineer to install appropriate signs and markings at the designated locations; containing a cumulative clause; containing a savings and severability clause; providing for a maximum penalty or fine of two hundred dollars ($200.00); and ordering publication.

Recommended City Council Action:

Approve

Fiscal Impact:

Approximately $42,500.00 for the installation cost of new signs, including materials, equipment, and labor.

Discussion:

The City Attorney's Office has prepared an ordinance authorizing the installation of stop signs at various intersections within the City of Midland. This ordinance has been requested to assign right-of-way at each intersection in compliance with the Texas Manual on Uniform

Traffic Control Devices.

There are 85 locations recommended for new stop signs that are on newly constructed streets or at locations for which no type of formal traffic control has previously existed.

The locations for new stop signs are as follows:

On At
Banjo Rd. Ivy Ct.
Battle Ave. Lonesome Dove Ln.
Becker Dr. Sandstone Dr.
Blackberry Ct. Hollyberry Ln.
Blue Sky St. Battle Ave.
Blue Sky St. Southwest St.
Blue Quail Ct. Scaled Quail Rd
Bob White Ct. Mountain Quail Rd.
Calen Ct. Ridgefield Ct.
Candice Rd. Tower Rd.
Cape Cod Ln. Providence Dr.
Casady Ct. St. Andrews Ct.
Charles Dr. Rustic Tr.
Cholla Rd. Antelope Tr.
Chretien Pl. Belle Grove Ct.
Colonial Oaks Ct. Dunbarton Oaks Blvd.
Colonel Ct. Leather Ln.
Covington Ct. Jordy Rd.
Crestdale St. Crestridge Dr.
Cross Pointe Dr. Briarwood Ave.
Draw Ct. Ranch Ave
Dunbarton Oaks Blvd Mockingbird Ln.
Feldspar Ln. GraniteLn.
Feldspar Ln. Quartz Ln.
Fiddler Rd. Ranch Ave.
Fiddler Rd. Southwest St.
Franklin Ave. Walker St.
Freedom Ct. Beal Pkwy.
On At
Frost Pl. Castleford Pl.
Gambles Quail Rd. Mountain Quail Rd.
Gambles Quail Rd. Mearns Ct.
Hazal Ln. Carriage Rd.
High Noon Ct. Stake Ave.
Hollyberry Ln. Bayberry Pkwy.
Homestead Blvd Homeland Ct.
Horizon Rd. Meadowside St.
Horizon Rd. Sunnyvale St.
Humble Ave. Marcie Ln.

Ivy Ct. Rio Bravo St.
Jordy Rd. Tower Rd.
Kiowa Dr. Meadow Dr.
Lawson St. N. "D" St.
Lawson St. N. "G" St.
Leather Ln. Ivy Ct.
Leather Ln. Southwest Ct.
Legacy Oaks Ct. Dunbarton Oaks Blvd.
Lonesome Dove Ln. Southwest St.
Marfa Ln. Tin Tr.
Moran St. Marlin St.
Mountain Quail Rd. Scaled Quail Rd.
Oaklawn Dr. Stanolind Ave.
Pioneer Cir. Ranch Ave.
Pioneer Cir. Ranch Ave.
Ridgeway Rd. Meadowside St.
Ridgeway Rd. Sunnyvale St.
Ringo Ct Carriage Rd.
Ringo Ct. Draw Ct.
On At
Rio Bravo St Ranch Ave.
Rio Bravo St Southwest St.
Sagebrush Rd Meadowside St.
Sagebrush Rd Sunnyvale St.
Sandstone Dr Green Tree Blvd
Sandstone Dr Sherwood Dr.
Scaled Quail Rd Valley Quail Rd.
Scenic Rd Meadowside St.
Scenic Rd Sunnyvale St.
Shadybrook Rd Meadowside St.
Shadybrook Rd Sage Brush Rd.
Sherwood Dr Sandstone Dr.
Skyview Rd Meadowside St.
Skyview Rd Sunnyvale St.
Southwest St. Carriage Rd.
Stage Coach Ct. Blue Sky St.
Stellar Pl. N. Godfrey St.
Stellar Pl. Trinity Dr.
Tampico Dr. Monterrey Dr.
Tampico Dr. Denton St.
Tower Rd. Jordy Rd.
Tower Rd. Jordy Rd.
Vista Ridge Rd. Meadowside St.
Vista Ridge Rd. Sunnyvale St.
Westmont Ct. Whittle Way
Woodlawn Dr. Stanolind Ave.
Woodlawn Dr. Gulf Ave.

Wyatt Way Stake Ave.

Morris William Jr.

City Manager's Office

ORDINANCE NO. _____

AN ORDINANCE ESTABLISHING INTERSECTION STOPS AT VARIOUS LOCATIONS WITHIN THE CITY OF MIDLAND, TEXAS; AUTHORIZING AND DIRECTING THE TRAFFIC ENGINEER TO INSTALL APPROPRIATE SIGNS AND MARKINGS AT THE DESIGNATED LOCATIONS; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF TWO HUNDRED DOLLARS ($200.00); AND ORDERING PUBLICATION

WHEREAS, the Council finds that the unusual character and volume of traffic on various intersecting streets within the City require that operators of motor vehicles traveling along said streets stop before entering said intersections; and

WHEREAS, the Council finds it to be in the public interest to authorize and require the establishment of stop signs at said intersections;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

SECTION ONE. In addition to all other stop signs, stop signs at the intersections enumerated in the following list are hereby ordered to be erected and are hereby validated and fully authorized, whether the same have already been placed and are existing upon said intersections, or shall be placed there hereafter, and all persons operating vehicles upon or over the streets of the City of Midland shall obey such stop signs. All streets located in the column under the word "On" are the streets on which stop signs are hereby ordered and authorized at their intersection with the streets listed on the same line and in the column immediately to the right headed by the word "At".

ON	**AT**
"A" St.	Indiana Ave.
"A" St.	Missouri Ave.
"A" St.	Mockingbird Ln.
"A" St.	Solomon Ln.
Abbey Pl.	Everglade Ave.
Aberdeen Dr.	Cedar Springs Dr.
Aberdeen Dr.	Ruby Dr.
Aberdeen Dr.	Spraberry Dr.

ON	AT
Acklen Dr.	Roosevelt Dr.
Acoma Ct.	Pavilion Pkwy.
Adams St.	Garden Ln.
Adams St.	Illinois Ave.
Adams St.	Indiana Ave.
Adams St.	Kentucky Ave.
Adams St.	New York Ave.
Adams St.	Pennsylvania Ave.
Adams St.	Wall St.
Adams St.	Walnut Ln.
Adams St.	Washington Ave.
Adonia St.	Cheyenne St.
Advance Ave.	Industrial Ave.
Affirmed Ave.	Alysheba Ln.
Ainslee St.	Bedford Dr.
Ainslee St.	Cuthbert Ave.
Ainslee St.	Kansas Ave.
Ainslee St.	Louisiana Ave.
Ainslee St.	Princeton Ave.
Airport 20 Rd.	La Force Blvd.
Alamo Dr.	Crockett Ave.
Alamosa Ct.	Gunnison Dr.
Alcove Ct.	Douglas St.
Alice St.	Barkley Ave.
Alice St.	Delano Ave.
Alice St.	Franklin Ave.
Alice St.	Kessler Ave.
Alice St.	Mariana Ave.
Alkan St.	Calumet St.
Alkan St.	Chaparral St.
Allandale Ct.	Sherwood Dr.
Allen St.	New Jersey Ave.
Allen St.	Taylor Ave.
Almey Ct.	Rustic Tr.
Almont Pl.	Gunnison Dr.
Alpine St.	Cuthbert Ave.
Alpine St.	Louisiana Ave.
Alta Ave.	Pecos St.
Amelia Dr.	Anetta Dr.
Amelia Dr.	Fairmont Dr.
Amigo Dr.	Goliad Dr.
Amigo Dr.	Storey Ave.
Andrews Hwy. Frontage	Godfrey St.
Andrews Hwy. Frontage	McDonald Ave.
Andover Ave.	Ward St.
Anetta Dr.	Eisenhower Dr.
Anetta Dr.	Raymond Rd.
Anetta Dr.	Spraberry Dr.
Anetta Dr.	Waverly Dr.
Angelina Dr.	Haynes Ave.

ON	AT
Angelina Dr.	Lehigh Dr.
Anthem Rd.	Bunker Hill Rd.
Apache Dr.	Holly Dr.
Apache Dr.	Waverly Dr.
Apperson Dr.	Maxwell Ave.
Apperson Dr.	Whitney Dr.
Apple Creek Rd.	Mathis St.
Apple Creek Rd.	Oak Valley Dr.
Arapahoe Rd.	Elkins Rd.
Arbor Cir.	Sunshine Pkwy.
Armadillo Dr.	Maverick Ln.
Armadillo Dr.	Prairie Rd.
Arrowhead Trail	Vista West Pkwy.
Arroyo Dr.	Haynes Ave.
Arroyo Dr.	Northfield Dr.
Ashwood Ct.	Heritage Blvd.
Aspen Dr.	Dentcrest Dr.
Aspen Dr.	Mark Ln.
Aster Ave.	Avalon Dr.
Aster Ave.	Golden Gate Dr.
Atlanta St.	California Ave.
Atlanta St.	Gist Ave.
Atlanta St.	Hicks Ave.
Atlanta St.	New York Ave.
Auburn Ct.	Ward St.
Auburn Dr.	Whitney Dr.
Auburn Pl.	Lanham St.
Audie Ct.	Beal Pkwy.
Aurora Way	Lumina Dr.
Aurora Ln.	McDonald Dr.
Aurora Ln.	Suncrest Ave.
Austin St.	Baumann Ave.
Austin St.	Bedford Dr.
Austin St.	Cuthbert Ave.
Austin St.	Kansas Ave.
Avalon Dr.	Briarwood Ave.
Avondale Dr.	Leddy Dr.
Avondale Dr.	McDonald Dr.
Avondale Dr.	Raymond Dr.
Azalea Ct.	Rosewood Dr.
"B" St.	Cuthbert Ave.
"B" St.	Gulf Ave.
"B" St.	Harvard Ave.
"B" St.	Indiana Ave.
"B" St.	Kansas Ave.
"B" St.	Louisiana Ave.
"B" St.	Michigan Ave.
"B" St.	Missouri Ave.
"B" St.	Tennessee Ave.
Baca St.	Mockingbird Ln.

ON	AT
Baca St.	San Miguel Ave.
Baird St.	California Ave.
Baird St.	Griffin Ave.
Baird St.	Hicks Ave.
Baird St.	Indiana Ave.
Baird St.	Kentucky Ave.
Baird St.	Longview Ave. (northbound)
Baird St.	Longview Ave. (southbound)
Baird St.	Louisiana Ave.
Baird St.	Main St.
Baird St.	Michigan Ave.
Baird St.	New Jersey Ave.
Baird St.	New York Ave.
Baird St.	Taylor Ave.
Baird St.	Washington Ave.
Bald Eagle Ct.	McPherson Ln.
Baldwin St.	Brunson Ave.
Baldwin St.	College Ave.
Baldwin St.	Holloway Ave.
Baldwin St.	Indiana Ave.
Baldwin St.	Kentucky Ave.
Baldwin St.	Washington Ave.
Balfour Ct.	Deer Run Ave.
Balfour Ct.	Greathouse Ave.
Baltic Ave.	Dormard Ave.
Baltic Ave.	Pacific Ave.
Banjo Rd.	Ivy Ct.
Banks Dr.	La Force Blvd.
Banks Dr.	Sloan Field Blvd.
Barber St.	Cedar Ave.
Barber St.	Dormard Ave.
Barber St.	Golf Course Rd.
Barber St.	Hickory Ave.
Barber St.	Magnolia Ave.
Barber St.	Maple Ave.
Barber St.	Oak Ave.
Barber St.	Pecan Ave.
Barber St.	Pine Ave.
Barber St.	Shandon Ave.
Barber St.	Spruce Ave.
Barking Rock	Fall Creek
Barking Rock	Sister Creek
Barkley Ave.	Crestview Rd.
Barkley Ave.	Powell St.
Baron Dr.	Occidental Pkwy.
Baron Dr.	Ranch Ave.
Basswood Cir.	Sequoia Dr. (both intersections)
Barton Springs Ct.	Barton Creek Rd.
Bates Dr.	Sinclair Ave.

ON	AT
Battle Ave.	Lonesome Dove Ln.
Baumann Ave.	Alpine St.
Baumann Ave.	Godfrey St.
Baumann Ave.	Kansas Ave.
Baumann Ave.	McDonald St.
Baybridge Ct.	Eastview Dr.
Baybridge Ct.	Westview Dr.
Baybrook Dr./Ct.	Rockwood Dr.
Baybrook Dr./Pl.	Valwood Dr.
Beachwood St.	Calumet St.
Beachwood St.	Chukar Ln.
Beal Pkwy.	Graceland Dr.
Beal Pkwy.	Leisure Dr.
Beal Pkwy.	Thomason Dr.
Beals Creek Dr.	Comal Dr.
Beals Creek Dr.	Heritage Oaks Dr.
Beals Creek Dr./Ct.	Pedernales Dr.
Becker Dr.	Sandstone Dr.
Beckley Dr.	Cedar Spring Dr.
Beckley Dr.	Sprayberry Dr.
Bedford Ave.	Alpine St.
Bedford Ave.	Austin St.
Bedford Dr.	"B" St.
Bedford Dr.	"D" St.
Bedford Ave.	Delmar St.
Bedford Ave.	E. Broadway St.
Bedford Ave.	"G" St.
Bedford Ave.	Godfrey St. (westbound)
Bedford Ave.	Idlewilde Dr.
Bedford Dr.	Lanham St.
Bedford Ave.	Maberry St.
Bedford Ave.	Manor St.
Bedford Ave.	McDonald St.
Bedford Dr.	Mogford St.
Bedford Ave.	"N" St.
Bedford Ave.	Tarleton St.
Bedford Dr.	W. Broadway St.
Bedford Dr.	Ward St.
Bedford Ave.	Woodcrest Dr.
Beechwood Ct.	Teakwood Tr.
Belair Dr.	Stonybrook Dr.
Bellechasse Ct.	Chapel Hill Dr.
Bellechasse Ct.	Fairview Ln.
Bellegrove Ct.	Keswick Rd.
Belmont St.	Collins Ave.
Belmont St.	Gist Ave.
Belmont St.	Griffin Ave.
Belmont St.	Hicks Ave.
Belmont St.	Longview Ave.
Belmont St.	Rhode Island Ave.

ON	AT
Belmont St.	Stokes Ave.
Belmont St.	Summit Ave.
Belmont St.	Wolcott Ave.
Belton Pl.	Concho Dr.
Benton St.	California Ave.
Benton St.	Golf Course Rd.
Benton St.	Indiana Ave.
Benton St.	Morgan Way
Benton St.	New York Ave.
Benton St.	Oak Ave.
Benton St.	Pine Ave.
Bentwood Dr.	Crescent Dr.
Bentwood Dr.	Cuthbert Ave.
Bentwood Dr.	Graceland Dr.
Bentwood Dr.	Ric Dr.
Berkeley Trail	Carpenter Way
Big Bend Country	Buffalo Gap
Billingsley Blvd.	Caldera Blvd.
Binney Cv.	Rex Rd.
Bishops Castle Dr.	Castleford Rd.
Bison St.	Rio Pl.
Bison St.	Outlaw Ct.
Blackberry Ct.	Hollyberry Ln.
Blackwood Dr.	Homestead Blvd.
Blake Dr.	Garrett Dr.
Blake Dr.	Trennon Pl.
Blakemore Ct.	Northfield Dr.
Blanco Dr.	Llano Ct.
Blanco Dr.	Medina Dr.
Blanco Dr.	Oak Creek Dr.
Bluebell Dr.	Bastrop Ave.
Bluebell Dr.	Occidental Pkwy.
Bluebird Ln.	Midkiff Rd.
Blue Bonnet Ave.	Avalon Dr.
Blue Bonnet Ave.	Golden Gate Dr.
Blue Quail Ct.	Scaled Quail Rd.
Blue Sky St.	Battle Ave.
Blue Sky St.	Southwest St.
Bob White Ct.	Mountain Quail Rd.
Boeing Dr.	Fannin Ave.
Boeing Dr.	Neely Ave.
Boeing Dr.	Sentinel Dr.
Bonham St.	Cuthbert Ave.
Bonham St.	Kansas Ave.
Bonham St.	Willingham Dr.
Boot Dr.	Lone Star Ln.
Boot Dr	Red River Ln.
Bosque Dr.	Lampasas Dr.
Boulder Dr.	Arroyo Dr.
Boulder Dr.	Haynes Ave.

ON	AT
Bowie Dr.	Bentwood Dr.
Bowie Dr.	Edgewood Dr.
Bowie Dr.	Goliad Dr.
Bowman Cir.	Arapahoe Rd.
Boyd Ave.	"C" St.
Boyd Ave.	Cessna Dr.
Boyd Ave.	"D" St.
Boyd Ave.	Godfrey St.
Boyd Ave.	Lanham St.
Boyd Ave.	McDonald St.
Boyd Ave.	Mogford St.
Boyd Ave.	"N" St.
Boyd Ave.	Sinclair Ave.
Boyd Ave.	Sparks St.
Boyd Ave.	Tarleton St.
Boyd Ave.	Upland St.
Bradford Ct.	Knights Pl.
Brand Ln.	Buffalo Gap
Brand Ln.	Lone Star Ln.
Brazos Ave.	Amistad Dr.
Brazos Ave. / Ct.	Conroe St.
Brazos Ave.	Spence Dr.
Breckenridge Dr.	Durango Dr.
Breezeway Ct.	Bent Tree Tr.
Brentwood Dr.	Homestead Blvd.
Briaroaks Ct. / Dr.	Homestead Blvd.
Briarpath Dr.	Rosewood Dr.
Bridle Dr.	Rattler Ln.
Bridle Dr.	Wrangler Ln.
Brighton Pl.	Ashdown Pl.
Broadway St.	Cuthbert Ave.
Bromegrass St.	Beachwood St.
Bromegrass St.	Calumet St.
Bromley Pl.	Mayfield Pl.
Bronco Ct.	Buffalo Gap (both intersections)
Brookdale Dr.	Anetta Dr.
Brookdale Dr.	Bentwood Dr.
Brookdale Dr.	Eisenhower Dr.
Brooks Dr. (both intersections)	Raymond Rd.
Brown Heart Ln.	Deer Run Ave.
Brown Heart Ln.	Holiday Hill Rd.
Brown Heart Ln.	Riverside Dr.
Brownwood Dr.	Bentwood Dr.
Brunson Ave.	"L" St.
Brunson Ave.	Mann St.
Brunswick Cr.	Chapel Hill
Brush Dr.	Six Flags
Bryant St.	Eugene Ave.
Bryant St.	George Ave.
Bryant St	Hamby Ave.

ON	AT
Bryant St.	Hart Ave.
Bryant St.	Humble Ave.
Bryant St.	Jax Ave.
Buchanan Pl.	Rio Grande Ave.
Buffalo Ct.	Ranch Hand Dr.
Buffalo Gap	Lone Star Ln.
Buffalo Gap	Occidental Pkwy.
Buffalo Gap	Rattler Ln.
Bunche St.	California Ave.
Burchill Dr.	Anetta Dr.
Burchill Dr.	Brookdale Dr.
Burchill Dr.	Comanche Dr.
Burchill Dr.	Erie Dr.
Burchill Dr.	Parkdale Dr.
Burchill Dr.	Pasadena Dr.
Burchill Dr.	Pleasant Dr.
Burchill Dr.	Wilshire Dr.
Burgandy Dr.	Stonebridge Dr.
Burleson St.	Brunson Ave.
Burleson St.	College Ave.
Burleson St.	Holloway Ave.
Burleson St.	Kentucky Ave.
Burleson St.	Washington Ave.
Burnett Ln.	Lone Star Ln.
Butler Ave.	Baird St.
Butler Ave.	Main St.
Butternut Ln.	Jackson St.
Butternut Ln.	Oak Ave.
Butternut Ln.	Pecan Ave.
"C" St. (northbound traffic)	College Ave.
"C" St. (southbound traffic)	College Ave.
"C" St.	Cuthbert Ave.
"C" St.	Douglas Ave.
"C" St.	Golf Course Rd.
"C" St.	Gulf Ave.
"C" St. (northbound traffic)	Indiana Ave.
"C" St. (southbound traffic)	Indiana Ave.
"C" St.	Louisiana Ave.
"C" St.	Michigan Ave.
"C" St.	Missouri Ave.
"C" St.	Stanolind Ave.
Caldera Dr.	Melville Dr.
Calen Ct.	Ridgefield Ct.
Calhoun St.	California Ave.
Calhoun St.	Indiana Ave.
Calhoun St.	Kentucky Ave.
Calhoun St.	Orchard Ln.
Calhoun St.	Pennsylvania Ave.
Calhoun St.	Washington Ave.
California Ave.	Camp St.

ON	AT
California Ave.	Carver St.
California Ave.	Dallas St.
California Ave.	Jackson St.
California Ave.	Main St.
California Ave.	Marienfeld St.
California Ave.	Tilden St.
California Ave.	Weatherford St.
California Ave.	Webster St.
Camarie Ave.	Lanham St.
Camarie Ave.	Mogford St.
Camarie Ave.	Tarleton St.
Camarie Ave.	Ward St.
Camarie Ave.	Whitney Dr.
Camino Reale	Crowley Blvd.
Camino Reale	Guadalupe St.
Camino Reale	Llano Ct.
Camp St.	Carter Ave.
Camp St.	Collins Ave.
Camp St.	Dakota Ave.
Camp St.	Francis Ave.
Camp St.	Griffin Ave.
Camp St.	Industrial Ave.
Camp St.	Marlin St.
Camp St.	New Jersey Ave.
Canadian Ave.	Amistad Dr.
Canadian Ave.	Spence Dr.
Candice Rd.	Tower Rd.
Candle Tree Cv.	Melville Dr.
Candlestick Dr.	Hall of Fame Blvd.
Canemont Dr.	Gleneagles Dr.
Canemont Dr.	Tremont Ave.
Canterbury Dr.	Kensington Ln.
Canterbury Dr.	Polo Pkwy.
Canyon Dr. (both intersections)	Raymond Rd.
Canyon/Devonian Dr.	Spraberry Dr.
Cape Cod Ln.	Providence Dr.
Carbondale Ct.	Gunnison Dr.
Cardinal Ln.	Oriole Dr.
Cardinal Ln.	Polo Club Rd.
Carlton St.	Brunson Ave.
Carlton St.	College Ave.
Carlton St.	Holloway Ave.
Carlton St.	Kentucky Ave.
Carlton St.	Washington Ave.
Carmel Ct.	Llano Ct.
Carnation Ave.	Avalon Dr.
Carnation Ave.	Golden Gate Dr.
Carpenter Ct. / Way	Brown Heart Ln.
Carpenter Way	Oriole Dr.
Carriage Rd.	Occidental Pkwy.

ON	AT
Carrington Ct.	Rustic Tr.
Carrizo St.	Cuthbert Ave.
Carrizo St.	Louisiana Ave.
Carrizo St.	Michigan Ave.
Carrizo St.	Missouri Ave.
Carrizo St.	Nobles Ave.
Carrizo St.	Ohio Ave.
Carrizo St.	Storey Ave.
Carter Ave.	Garfield St.
Carver St.	Dormard Ave.
Carver St.	Golf Course Rd.
Carver St.	Indiana Ave.
Casa Grande Tr.	Guadalupe St.
Casa Grande Tr.	Llano Ct.
Casa Verde Ct.	San Clemente Dr.
Casady Ct.	St. Andrews Ct.
Cascade Ct.	Douglas St.
Casper Ct.	Trevino St.
Castle Pine Rd.	Spence Dr.
Castleford Rd.	Chapel Hill Dr.
Castleford Rd.	Lancashire Rd.
Castleford Rd.	Los Alamitos Rd.
Castleford Rd.	Melville Dr.
Castleford Rd.	Polo Pkwy.
Castlerock Ct.	Durango Dr.
Cattleman Dr.	Lone Star Ln.
Cattleman Dr.	Occidental Pkwy.
Cattleman Dr.	Randolph Ln.
Cedar Ave.	Cottonwood Ave.
Cedar Ave.	Main St.
Cedar Ave.	Tyler St.
Cedar Creek Rd.	Cooper Creek Dr.
Cedar Creek Rd.	Stonebridge Dr.
Cedar Spring Dr.	Devonian Dr.
Cedar Spring Dr.	Raymond Rd.
Centerview	Greenridge
Centerview	Windrift
Century Dr.	Comanche Dr.
Cerrillos Ave.	Baca St.
Cerrillos Ave.	Magellan St.
Cessna Dr.	Fannin Ave.
Cessna Dr.	Neely Ave.
Cessna Dr.	Sentinel Dr.
Cessna Dr.	Shell Ave.
Cessna Dr.	Stanolind Ave.
Chadwick Ct.	Ridgefield Ct
Champion Ave.	San Felipe Dr.
Chapel Hill Dr.	Bluebird Ln.
Chapel Hill Dr.	Faulkner Dr.
Chapel Hill Dr.	Keswick Rd.

ON	AT
Chaparral St.	Beachwood St.
Chaps Ln.	Avalon Dr.
Chaps Ln.	Longhorn Ln.
Charismatic Dr.	Alysheba Ln.
Charismatic Dr.	Secretariat St.
Charles Dr.	Rustic Tr.
Chatham Ct.	Ward St.
Checotah	Choctaw
Checotah	Kanawha
Chelsea Pl.	Mayfield Pl.
Chelsea Pl.	Whitman Dr.
Cherokee Dr.	Eisenhower Dr.
Cherry Ln.	Carver St.
Cherry Ln.	Tilden St.
Cherry Ln.	Tyler St.
Cherrywood Dr.	Briarpath Dr.
Cherrywood Dr.	Lemonwood Dr.
Cherrywood Dr.	Northcrest Dr.
Cherrywood Ct.	Oriole Dr.
Chesley Ct.	Rustic Tr.
Chestnut Ave.	Carver St.
Chestnut Ave.	Tilden St.
Cheyenne St.	Alkan St.
Chickasaw	Pueblo
Chickasaw	Tejas
Choate Pl.	Trinity Dr.
Choctaw	Daybreak Way
Choctaw Ct.	Lumina Dr.
Choctaw	Navajo
Choctaw	Overshine Ln.
Choctaw	Pueblo
Cholla Rd.	Antelope Tr.
Chon Cv.	Lindora Way
Chretien Pl.	Belle Grove Ct.
Chuck Wagon	Big Bend Country
Cimmaron Ave.	Dengar Ave.
Cimmaron Ave.	Godfrey St.
Cimmaron Ave.	"T" St.
Cimmaron Ave.	Mogford St.
Cimmaron Ave.	Lanham St.
Cimmaron Ave.	Mark Ln.
Cimmaron Ave.	McDonald Dr.
Cimmaron Ave.	Racquet Club Dr.
Cimmaron Ave.	Rees Ln.
Cimmaron Ave.	Shandon Ave.
Cimmaron Ave.	Tarleton St.
Cimmaron Ave.	Ward St.
Cimmaron Ave.	Wedgewood St.
Cimmaron Ave.	Ward St.
Cimmaron Ave.	Whitney Dr.

ON	AT
Cindy Pl.	Wydewood Dr.
Cisco St.	Arapahoe Rd.
Claremont Dr.	Mark Ln.
Claremont Dr.	Tremont Ave.
Clarewood Dr.	Greenville Cir.
Clarewood Dr.	Wood Dr.
Clark St.	Brunson Ave.
Clark St.	Franklin Ave.
Clark St.	Kentucky Ave.
Clark St.	Washington Ave.
Clay St.	California Ave.
Clay St.	Indiana Ave.
Clay St.	Orchard Ln.
Clayton Ct.	Whittle Way
Cloud Ave.	Edwards St.
Cloudcroft Ct.	Mark Ln.
Club Dr.	Crest Dr.
Club Dr.	Nobles Ave.
Co. Rd. 1220 S.	Industrial Ave.
Co. Rd. 83	Co. Rd. 1162
Coliseum Ct.	Riverfront Dr.
College Ave.	Clark St.
College Ave.	"G" St.
College Ave.	Indiana Ave.
Collins Ave.	Johnston St.
Collins Ave.	McKenzie St.
Collins Ave.	Main St.
Collins Ave.	Pratt St.
Colonel Ct.	Leather Ln.
Colonial Oaks Ct.	Dunbarton Oaks Blvd.
Colony Rd.	Arlington Rd.
Colony Rd.	Bunker Hill Rd.
Colony Rd.	Founders Rd.
Colony Rd.	Victory Pkwy.
Colorado St.	Collins Ave.
Colorado St.	Cuthbert Ave.
Colorado St.	Dakota Ave.
Colorado St.	Francis Ave.
Colorado St.	Gist Ave.
Colorado St.	Hicks Ave.
Colorado St.	Kansas Ave.
Colorado St.	Louisiana Ave.
Colorado St.	Michigan Ave.
Colorado St.	Missouri Ave.
Colorado St.	New Jersey Ave.
Colorado St.	New York Ave.
Colorado St.	Pennsylvania Ave.
Colorado St.	Rhode Island Ave.
Colorado St.	Stokes Ave.
Colorado St.	Taylor Ave.

ON	AT
Colorado St.	Washington Ave.
Colt Ct.	Candlestick Dr.
Columbian Dr.	Canyon Dr.
Columbian Dr.	Howard Dr.
Columbian Dr.	Waverly Dr.
Comal Dr.	Navasota Dr.
Comiskey Ct.	Riverfront Dr.
Commerce Dr.	I-20 N. Frontage Rd.
Commerce Dr.	Industrial Ave.
Commonwealth Rd.	Arlington Rd.
Commonwealth Rd.	Victory Pkwy.
Community Ln.	"D" St.
Community Ln.	"H" St.
Community Ln.	"J" St.
Community Ln.	"N" St.
Compton Dr.	Haynes Ave.
Compton Dr.	Lehigh Dr.
Concho Dr.	Amistad Dr.
Concho Dr.	Mathis St.
Concho Dr.	Spence Dr.
Concord Ave.	Lanham St.
Connell St.	Carter Ave.
Connell St.	Collins Ave.
Connell St.	Dakota Ave.
Connell St.	Griffin Ave.
Connell St.	Industrial Ave.
Connell St.	New Jersey Ave.
Connell St.	Taylor Ave.
Conquistador Ct.	Cerrillos Ave.
Conroe Ct.	Rio Grande Dr.
Conroe St.	Canadian Ave.
Conroe St.	Lavaca Ave.
Conroe St.	Rio Grande Dr.
Constitution Way	Patriot Pkwy.
Constitution Way	Victory Pkwy.
Convair Ct. / Dr. (both intersections)	Stonebridge Dr.
Convair Dr.	Torrey Vista Dr.
Cooper Creek Rd.	Solomon Ln.
Cooperstone Ct.	Daybreak Way
Copper Sky Ct.	Daybreak Way
Copper Sky Ct.	Lumina Ct.
Copus St.	Pecan Ave.
Cord Dr.	Apperson Dr.
Corona	Costa Mesa
Coronado Ct.	Camino Reale
Corporate Dr.	Edwards St.
Corral Dr.	Buffalo Gap
Corral Dr.	Occidental Pkwy.
Corral Dr.	Yellow Rose Ct.
Corsair Ct.	Island Dr.

ON	AT
Costa Mesa Ln.	Escondido
Costa Mesa Ln.	Navasota Dr.
Costa Mesa Ln.	San Pedro
Cotton Flat Rd.	Industrial Ave.
Cotton Tail Ct.	Buffalo Gap
Cottonwood Ave.	Barber St.
Cottonwood Ave.	Edwards St.
Cottonwood Ave.	Golf Course Rd.
Cottonwood Ave.	Main St.
Country Club Dr.	"B" St.
Country Club Dr.	E. Broadway St.
Country Club Dr.	W. Broadway St.
Country Club Dr.	"D" St.
Country Club Dr.	Delmar St.
Country Club Dr.	"G" St.
Country Club Dr.	Idlewilde Dr.
Country Club Dr.	"L" St.
Country Club Dr.	Lanham St.
Country Club Dr.	Mogford St.
Country Club Dr.	"N" St.
Country Club Dr.	Ward St.
Country Club Dr.	Woodcrest Dr.
Courage Pl.	Founders Rd.
Courage Pl.	Victory Pkwy.
Courtney Ct.	Rustic Tr.
Covington Ct.	Jordy Rd.
Cowboy Dr.	Lone Star Ln.
Cowden Ave.	Carver St.
Cowden Ave.	Dallas St.
Cowden Ave.	Edwards St.
Cowden Ave.	Jackson St.
Cowden Ave.	Main St.
Cranston Pl.	Crowley Blvd.
Crenshaw Dr.	Palmer Dr.
Crescent Dr.	Bentwood Dr.
Crescent Dr.	Dewberry Dr.
Crescent Dr.	Eisenhower Dr.
Crescent Dr.	Glenwood Dr.
Crest Dr.	Club Dr.
Crest Dr.	Ridglea Dr.
Crestdale St.	Crestgate Ave.
Crestdale St.	Crestridge Dr.
Crestdale St.	Crestwood Ave.
Crested Butte Ct.	Gunnison Dr.
Crestfield St.	Crestgate Ave.
Crestgate Ave.	Crestdale St.
Crestgate Ave.	Crestfield St.
Crestgate Ave.	Crestway Ln.
Crestgate Ave.	Gateway St.
Crestline Ave.	Crestway Ln.

ON	AT
Crestmont Dr.	Tremont Ave.
Crestmont Dr.	Whittle Way
Crestview Rd.	Delano Ave.
Crestview Rd.	Kansas Ave.
Crestview Rd.	Kessler Ave.
Crestview Rd.	Louisiana Ave.
Crestview Rd.	Mariana Ave.
Crestview Rd.	Michigan Ave.
Crestview Rd.	Ohio Ave.
Crestview Rd.	Roosevelt Ave.
Crestview Rd.	Storey Ave.
Crestview Rd.	Travis Ave.
Crestway Ln.	Crestgate Ave.
Crestwood Ave.	Crestfield St.
Crista Ln.	Bluebird Ln.
Crista Ln.	Caldera Blvd.
Crockett Ave.	Bentwood Dr.
Crockett Ave.	Edgewood Dr.
Crockett Ave.	Goliad Dr.
Crosley Ct.	Avalon Dr.
Crosley Ct.	Candlestick Dr.
Cross Pointe Dr.	Briarwood Ave.
Crowley Blvd.	Frio Dr.
Crowley Blvd.	Grassland Blvd.
Crowley Blvd.	Hereford Blvd.
Crowley Blvd.	Heritage Blvd.
Crowley Blvd.	Highland Blvd.
Crowley Blvd.	Rio Grande Ave.
Crowley Blvd.	Wadley Ave.
Crown Point Ct.	L'Enfant Ln.
Crystal Sky Ln.	Daybreak Way
Culross Ln.	Berkeley Trail
Culross Ln.	Oriole Dr.
Culver Dr.	Fannin Ave.
Culver Dr.	Neely Ave.
Culver Dr.	Sentinel Dr.
Cumberland Dr.	Neely Ave.
Cumberland Dr.	Ventura Ave.
Cunningham Dr.	Canyon Dr.
Cunningham Dr.	Holly Dr.
Cunningham Dr.	Howard Dr.
Cunningham Dr.	Waverly Dr.
Cuthbert Ave.	Carver St.
Cuthbert Ave.	Jackson St.
Cuthbert Ave.	Maberry St.
Cuthbert Ave.	Main St.
Cuthbert Ave.	Mogford St.
Cypress Ct.	Teakwood Trace
"D" St.	College Ave.
"D" St.	Cuthbert Ave.

ON	AT
"D" St.	Douglas Ave.
"D" St.	Golf Course Rd.
"D" St.	Harvard Ave.
"D" St.	Humble Ave.
"D" St.	Indiana Ave.
"D" St.	Louisiana Ave.
"D" St.	Michigan Ave.
"D" St.	Missouri Ave.
"D" St.	Neely Ave.
Dahlia Ave.	Avalon Dr.
Dahlia Ave.	Golden Gate Dr.
Daisy Rd.	Victory Pkwy.
Dakota Ave.	Atlanta St.
Dakota Ave.	Baird St.
Dakota Ave.	Dallas St.
Dakota Ave.	Fort Worth St.
Dakota Ave.	Goode St.
Dakota Ave.	Jefferson St.
Dakota Ave.	Johnston St.
Dakota Ave.	"L" St.
Dakota Ave.	Main St.
Dakota Ave.	Marshall St.
Dakota Ave.	Mineola St.
Dakota Ave.	Terrell St.
Dakota Ave.	Weatherford St.
Dallas St.	Cuthbert Ave.
Dallas St.	Garden Ln.
Dallas St.	Golf Course Rd.
Dallas St.	Hamby Ave.
Dallas St.	Hicks Ave.
Dallas St.	Indiana Ave.
Dallas St.	Kansas Ave.
Dallas St.	Kentucky Ave.
Dallas St.	Michigan Ave.
Dallas St.	New Jersey Ave.
Dallas St.	New York Ave.
Dallas St.	Louisiana Ave.
Dallas St.	Nobles Ave.
Dallas St.	Ohio Ave.
Dallas St.	Parker Ave.
Dallas St.	Pennsylvania Ave.
Dallas St.	Taylor Ave.
Dallas St.	Washington Ave.
Dalton Dr.	Lanham St.
Dalton Dr.	Noel Ave.
Dartmouth Dr.	Culpeper Dr.
Dartmouth Dr.	Lanham St.
Daventry Rd.	Castleford Rd.
Daventry Rd.	Lancashire Rd.
Davies Ct.	Brown Heart Ln.

ON	AT
Davis Ave.	Adams St.
Davis Ave.	Carver St.
Davis Ave.	Lamesa Rd.
Davis Ave.	Lee St.
Dawn Cir. (both intersections)	Haynes Ave.
Daybreak Way	Moroni St.
Daybreak Way	Ojibwa
Daybreak Way	Ridge View St.
Daybreak Way	Sunrise Way
Deauville Blvd.	Avalon Dr.
Deauville Blvd.	Loop 250 Southbound Frontage Rd.
Deauville Blvd.	Tradewinds Blvd.
Debbie Cv.	Fredna Pl.
Deeanna Ln.	Crowley Blvd.
Deeanna Ln.	Hereford Blvd.
Deer Run Ave.	Hilltop Dr.
Deer Run Ave.	Riverside Dr.
Delaney	Val Verde Dr.
Delano Ave.	E. Circle Dr.
Delano Ave.	Holly Dr.
Delano Ave.	Powell St.
Delano Ave.	Roosevelt Dr.
Delano Ave.	Tanner Dr.
Dellwood St.	Baumann Ave.
Dellwood St.	Kansas Ave.
Delmar Dr.	Leddy Dr.
Delmar Dr.	Cuthbert Ave.
Delmar Dr.(northbound only)	Lockheed Ave.
Delmar St.	Storey Ave.
Dengar Ave.	Barber St.
Dengar Ave.	Edwards St.
Dengar Ave.	"I" St.
Dengar Ave.	Lanham St.
Dengar Ave.	Loma Dr.
Dengar Ave.	Main St.
Dengar Ave.	Mark Ln.
Dengar Ave.	Neely Ave.
Dengar Ave.	Pecos St.
Dengar Ave.	Tarleton St.
Dengar Ave.	Ward St.
Dengar Ave.	Whitney Dr.
Dengar Ave.	Wydewood Dr.
Dentcrest Dr.	Tremont Ave.
Dentcrest Dr.	Whittle Way
Dentcrest Dr. (southern most intersection)	Whittle Way
Dentcrest Dr.	Wydewood Dr.
Denton St.	Bedford Ave.
Denton St.	Cuthbert Ave.
Denton St.	Douglas Ave.
Desert Rose Dr. (both intersections)	Stonebridge Dr.

ON	AT
Desert Rose Dr.	Torrey Vista Dr.
Desta Dr. (both intersections)	Smith Rd.
Devlin Pl.	Crowley Blvd.
Devonian Dr.	Cedar Spring Rd.
Devonian Dr.	Monty Dr.
Devonian Dr.	Raymond Rd.
Devonian Dr.	Tanner Dr.
Devonshire Ct.	Richmond Dr.
Dewberry Dr.	Leisure Dr.
Dogwood Ct.	Driftwood Dr.
Donald St.	Illinois Ave.
Donald St.	Wall St.
Donald St.	Willeys Ave.
Dora Pl.	Neely Ave.
Dormard Ave.	Boardwalk
Dormard Ave.	Edwards St.
Dormard Ave.	Loma Ave.
Dormard Ave.	Main St.
Dormard Ave.	Pecos St.
Dorsey Ave.	Loma Dr.
Dorsey Ave.	Pecos St.
Douglas Ave.	Alpine St.
Douglas Ave.	Austin St.
Douglas Ave.	"B" St.
Douglas Dr.	Boeing Dr.
Douglas Dr.	Cessna Dr.
Douglas Dr.	Culver Dr.
Douglas Ave.	"D" St.
Douglas Ave.	Delmar Ave.
Douglas Ave.	"H" St.
Douglas Ave.	"J" St.
Douglas Ave.	"L" St.
Douglas Ave.	McDonald St.
Douglas Ave.	"N" St.
Douglas Ave.	Northrup Dr.
Douglas Ave.	Tarleton St.
Douglas Ave.	Upland St.
Douglas Ave.	Ward St.
Douglas Ave.	Whitney Dr.
Douglas Ave.	Woodcrest Dr.
Dowdle Dr.	Neely Ave.
Dowdle Dr.	Ventura Ave.
Downing Ave.	Norwood St.
Downing Ave.	Stratton Dr.
Draw Ct.	Ranch Ave.
Drexel Ct.	Heritage Blvd.
Dukes Dr.	Polo Pkwy.
Dunbar St.	Cuthbert Ave.
Dunbar St.	Willingham Dr.
Dunbarton Oaks Blvd.	Mockingbird Ln.

ON	AT
Dunblane Dr.	Dumfries Rd.
Dunblane Dr.	Trobaugh Blvd.
Dunkirk St.	Downing Ave.
Dunkirk St.	Lehigh Dr.
Dunraven Ct.	Deer Run Ave.
Dupont Ct.	McPherson Ln.
Durant Dr.	Maxwell Dr.
Durant Dr.	Ward St.
Durant Dr.	Whitney Dr.
Dyer Cir.	Haynes Ave.
"E" St.	College Ave.
"E" St.	Indiana Ave.
"E" St.	Missouri Ave.
"E" St.	Washington Ave.
E. Broadway St.	Cuthbert Ave.
E. Broadway St.	Harvard Ave.
E. Broadway St.	Louisiana Ave.
E. Broadway St.	Michigan Ave.
E. Broadway St.	Storey Ave.
E. Circle Dr.	Delano Ave.
E. Industrial Loop	Industrial Ave.
Earhart Dr. (both intersections)	La Force Blvd.
Edgewood Dr.	Monty Dr.
Eastview Dr.	Bluebird Ln. (northbound)
Eastwood Dr.	Ric Dr.
Eastwood Dr.	Storey Ave.
Edgebrook Dr./Ct.	Rockwood Dr.
Edgebrook Dr./Pl.	Valwood Dr.
Edgemont Dr.	Tremont Ave.
Edgemont Dr.	Whittle Way
Edgewood Dr.	Cuthbert Ave.
Edgewood Dr.	Dewberry Dr.
Edgewood Dr.	Eisenhower Dr.
Edgewood Dr.	Glenwood Dr.
Edinburgh Dr.	Dumfries Rd.
Edinburgh Dr.	Trobaugh Blvd.
Edwards St.	Cedar Ave.
Edwards St.	Cuthbert Ave.
Edwards St.	Dormard Ave.
Edwards St.	Golf Course Rd.
Edwards St.	Mississippi Ave.
Edwards St.	Oak Ave.
Edwards St.	Parker Ave.
Edwards St.	Pecan Ave.
Edwards St.	Pine Ave.
Edwards St.	Shandon Ave.
Edwards St.	Spruce Ave.
Eisenhower Dr.	Anetta Dr.
Eisenhower Dr.	Comanche Dr.
Eisenhower Dr.	Edgewood Dr.

ON	AT
Eisenhower Dr.	Graceland Dr.
Elizabeth Ave.	Baldwin St.
Elizabeth Ave.	Carlton St.
Elizabeth Ave.	Clark St.
Elizabeth Ave.	Key St.
Elizabeth Ave.	Mann St.
Elk Ave.	"B" St.
Elm Ave.	Barber St.
Elm Ave.	Edwards St.
Elm Ave.	Main St.
Elma Dr.	Aspen Dr.
Elma Dr.	Whittle Way
Elma Dr.	Wydewood Dr.
Emerson Dr. / Ct.	Lanham St.
Emerson Dr.	Ward St.
Emerson Ln.	Ward St.
Emerson Pl.	Whitney Dr.
English Dr.	Benton St.
English Dr.	Golf Course Rd.
Erie Dr.	Devonian Dr.
Erie Dr.	Eisenhower Dr.
Erie Dr.	Graceland Dr.
Erie Dr.	Meadow Dr.
Escondido	Frio Dr.
Estes Ave.	Carver St.
Estes Ave.	Colorado St.
Estes Ave.	Dallas St.
Estes Ave.	Jackson St.
Estes Ave.	Main St.
Estes Ave.	Marienfeld St.
Estes Ave.	Pecos St.
Estes Ave.	Whitaker St.
Eugene Ave.	Marienfeld St.
Everglade Ave.	Lindora Way
Everglade Ave.	Wydewood Dr.
Evergreen Ave.	Avalon Dr.
Evergreen Ave.	Golden Gate Dr.
Executive Ct.	Island Dr.
Exeter Ave.	Ward St.
"F" St.	College Ave.
"F" St.	Cuthbert Ave.
"F" St.	Indiana Ave.
"F" St.	Kentucky Ave.
"F" St.	Louisiana Ave.
"F" St.	Michigan Ave.
"F" St.	Missouri Ave.
Fairbanks Dr.	Mark Ln.
Fairfax Ct.	Ward St.
Fairfield Ln.	Mayfield Pl.
Fairfield Ln.	Whitman Dr.

ON	AT
Fairgate Dr.	Mark Ln.
Fairgreen Ct.	Fairbanks Dr.
Fairgrounds Rd.	Mockingbird Ln.
Fairgrounds Service Rd.	Rattler Ln.
Fairhaven Ct.	Whittle Way
Fairmont Dr.	Anetta Dr.
Fairmont Dr.	Waverly Dr.
Fairview Ln.	Castleford Rd.
Fairview Ln.	Chapel Hill Dr.
Fairview Ln.	Keswick Rd.
Fairwood Dr./Ct.	Rockwood Dr.
Fairwood Dr./Pl.	Valwood Dr.
Falcon Pl.	Concho Dr.
Fall Creek	Sandstone Dr.
Fannin Ave.	Dengar Ave.
Fannin Ave.	Lanham St.
Fannin Ave.	Mark Ln.
Fannin Ave.	McDonald Dr.
Fannin Ave.	Mogford St.
Fannin Ave.	Rees Ln.
Fannin Ave.	Tarleton St.
Fannin Ave.	Ward St.
Fannin Ave.	Whitney Dr.
Fargo Ave.	Boulder Dr.
Fargo Ave.	Norwood St.
Fargo Ave.	Stillmeadow Dr.
Fasken Dr.	Anetta Dr.
Feldspar Ln.	Granite Ln.
Feldspar Ln.	Quartz Ln.
Fern Ave.	Avalon Dr.
Fern Ave.	Golden Gate Dr.
Fiddler Rd.	Ranch Ave.
Fiddler Rd.	Southwest St.
Fieldcrest Ln.	Northfield Dr.
Fieldcrest Ln.	Woodhaven Dr.
Fielder St.	Crestgate Ave.
Fields Pl.	Keswick Rd.
Fiesta Ave.	Edwards St.
Fisher St.	Francis Ave.
Flare Ct.	Lanham St.
Flatland Ct.	Brush Dr.
Flicker Dr.	Sparhawk Dr.
Floyd Ct.	Trevino St.
Foggy Bottom Ct.	McPherson Ln.
Fort Worth St.	California Ave.
Fort Worth St.	Cuthbert Ave.
Fort Worth St.	Gist Ave. (northbound)
Fort Worth St.	Golf Course Rd.
Fort Worth St.	Hicks Ave.
Fort Worth St.	Indiana Ave.

ON	AT
Fort Worth St.	Kentucky Ave.
Fort Worth St.	Longview Ave. (northbound)
Fort Worth St.	Louisiana Ave.
Fort Worth St.	Michigan Ave.
Fort Worth St.	Mississippi Ave.
Fort Worth St.	New Jersey Ave.
Fort Worth St.	New York Ave.
Fort Worth St.	Parker Ave.
Fort Worth St.	Peck Ave. (southbound)
Fort Worth St.	Pennsylvania Ave.
Fort Worth St.	Stokes Ave. (northbound)
Fort Worth St.	Stokes Ave. (southbound)
Fort Worth St.	Summit Ave. (northbound)
Fort Worth St.	Summit Ave. (southbound)
Fort Worth St.	Taylor Ave.
Fort Worth St.	Washington Ave.
Fort Worth St.	Wolcott Ave. (northbound)
Fort Worth St.	Wolcott Ave. (southbound)
Fortitude Ct.	Patriot Pkwy.
Founders Rd.	Commonwealth Rd.
Founders Rd.	Patriot Pkwy.
Fox Hollow Ct.	Greenbriar Dr.
Foxboro Ct.	Meadowpark Dr.
Francis Ave.	Baird St.
Francis Ave.	Belmont St.
Francis Ave.	Camp Dr.
Francis Ave.	Colorado St.
Francis Ave.	Main St.
Franklin Ave.	Crestview Rd.
Franklin Ave.	E. Circle Dr.
Franklin Ave.	Kelly St.
Franklin Ave.	Powell St.
Franklin Ave.	Walker St.
Franklin Ave.	Williams St.
Fredna Pl.	Dengar Ave.
Fredna Pl.	Neely Ave.
Freedom Ct.	Beal Pkwy.
Freeport Ln.	Nassau Dr.
Freeport Ln.	Shell Ave.
Friar Tuck Ct.	Widener Strp.
Friendship	Brush
Fringewood Dr.	Homestead Blvd.
Frontier Dr.	Fannin Ave.
Frontier Dr.	Lanham St.
Frontier Dr.	Ward St.
Frontier Dr.	Whitney Dr.
Frost Pl.	Castleford Pl.
"G" St.	Bedford Ave.
"G" St.	Community Ave.
"G" St.	Cuthbert Ave.

ON	AT
"G" St.	Douglas Ave.
"G" St.	Golf Course Rd.
"G" St.	Harvard Ave.
"G" St.	Industrial Ave.
"G" St.	Louisiana Ave.
"G" St.	Michigan Ave.
"G" St.	Missouri Ave.
Gallop Ct.	San Francisco Ave.
Gambles Quail Rd.	Mearns Ct.
Gambles Quail Rd.	Mountain Quail Rd.
Garden Ln.	Dallas St.
Garden Ln.	Fairgrounds Rd.
Garden Ln.	Fort Worth St.
Garden Ln.	Terrell St.
Garden Ln.	Tilden St.
Garfield St.	Bluebird Ln.
Garfield St.	Carter Ave.
Garrett Dr.	Navasota Dr.
Gaston Dr.	Delano Ave.
Gaston Dr.	Godfrey St.
Gaston Dr.	Monty Dr.
Gaston Dr.	Raymond Rd.
Gateway St.	Caldera Blvd.
George Ave.	Marienfeld St.
George Ave.	Pecos St.
George Yard Ct. / Ln.	Deer Run Ave.
Geraldine St.	Gulf Ave.
Geraldine St.	Neely Ave.
Geraldine St.	Shell Ave.
Gist Ave.	E. Industrial Loop
Gist Ave.	Main St.
Gist Ave.	Terrell St.
Gladewood Dr.	Homestead Blvd.
Gladewood Dr.	Prairie Ridge Dr.
Gladiola Ave.	Avalon Dr.
Gladiola Ave.	Golden Gate Dr.
Glasgow Dr.	Dumfries Rd.
Glasgow Dr.	Trobaugh Blvd.
Glen Mist Dr.	Fringewood Dr.
Glen Mist Dr.	Gladewood Dr.
Gleneagles Ct.	Greenbriar Dr.
Gleneagles Dr.	Greenbriar Dr.
Gleneagles Dr.	Mark Ln.
Glenwood Dr.	Edgewood Dr.
Glenwood Dr.	Leisure Dr.
Goddard Dr. / Ct.	Lanham St.
Goddard Dr.	Ward St.
Goddard Pl.	Meadowbrook Dr.
Goddard Pl.	Whitney Dr.
Godfrey St.	Avondale Dr.

ON	AT
Godfrey Ct.	Godfrey St.
Godfrey St.	Cuthbert Ave.
Godfrey St.	Douglas Ave.
Godfrey St.	Haynes Ave.
Godfrey St.	Louisiana Ave.
Godfrey St.	Neely Ave.
Godfrey St.	Northfield Dr.
Godfrey St.	Roosevelt Ave.
Godfrey St.	Shandon Ave.
Godfrey St.	St. Andrews Dr.
Godfrey St.	Tanner Dr.
Golden Gate Dr.	Briarwood Ave.
Golf Course Rd.	Elkins Rd.
Golf Course Rd.	Main St.
Golf Course Rd.(westbound)	Scharbauer Dr.
Goliad Dr.	Crockett Ave.
Goliad Dr.	Cuthbert Ave.
Goliad Dr.	Ric Dr.
Goode St.	Carter Ave.
Goode St.	Francis Ave.
Goode St.	Montgomery Ave.
Gossett St.	Indiana Ave.
Gossett St.	Missouri Ave.
Graceland Dr.	Beal Pkwy.
Graceland Dr.	Bentwood Dr.
Graceland Dr.	Eisenhower Dr.
Graham Dr.	Palmer Dr.
Grainger Rd.	Cedar Creek Rd.
Grainger Rd.	Milltown Rd.
Grainger Rd.	Porterfield Rd.
Grassland Blvd.	Crowley Blvd.
Grassland Blvd.	W. Heritage Blvd.
Greathouse Ave.	Brown Heart Ln.
Greathouse Ave.	Hilltop Dr.
Greathouse Ave.	Mathis St.
Greathouse Ave.	Spence Dr.
Greenbriar Ave.	Hyde Park Ave.
Greenbriar Dr.	Radcliff Ct.
Greenbriar Dr.	Springfield Ct.
Greenbriar Dr.	St. Andrews Dr.
Greenridge	Heritage Blvd.
Greenville Dr.	Valwood Dr.
Griffin Ave.	Colorado St.
Griffin Ave.	Dallas St.
Griffin Ave.	Fort Worth St.
Griffin Ave.	Goode St.
Griffin Ave.	Johnston St.
Griffin Ave.	Main St.
Griffin Ave.	Terrell St.
Griffin Ave.	Weatherford St.

ON	AT
Griffith Ct. / Dr.	Candlestick Dr. / Nolan Ryan Dr.
Griffith Dr.	Deauville Blvd.
Guadalupe St.	Frio Dr.
Guadalupe St.	Los Patios Dr.
Guadalupe St.	Rio Grande Ave.
Guadalupe St.	San Saba Ct.
Gulf Ave.	Cessna Dr.
Gulf Ave.	Culver Dr.
Gulf Ave.	"D" St.
Gulf Ave.	Godfrey St.
Gulf Ave.	Hughes St.
Gulf Ave.	Huntington St.
Gulf Ave.	"I" St.
Gulf Ave.	"L" St.
Gulf Ave.	Lanham St.
Gulf Ave.	McDonald Dr.
Gulf Ave.	Mark Ln.
Gulf Ave.	Mogford St.
Gulf Ave.	"N" St.
Gulf Ave.	Northrup Dr.
Gulf Ave.	Tarleton Dr.
Gulf Ave.	Ward St.
Gulf Ave.	Whitney Dr.
Gulf Ave.	Winfield Rd.
"H" St.	Bedford Dr.
"H" St.	College Ave.
"H" St.	Golf Course Rd.
"H" St.	Humble Ave.
"H" St.	Indiana Ave.
"H" St.	Michigan Ave.
"H" St.	Missouri Ave.
"H" St.	Neely Ave.
"H" St.	Ohio Ave.
"H" St.	Princeton Ave.
"H" St.	Tennessee Ave.
"H" St.	Washington Ave.
Hackberry Ct.	Teakwood Trace
Hagen Ct.	Beal Pkwy.
Half Moon Cir.	Riverside Dr.
Hall of Fame Blvd.	Arlington Rd.
Hall of Fame Blvd.	Avalon Dr.
Hall of Fame Blvd.	Riverfront Dr. / Shea Ln.
Hall of Fame Blvd.	Victory Pkwy.
Hamby Ave.	Carver St.
Hamby Ave.	Edwards St.
Hamby Ave.	Ft. Worth St.
Hamby Ave.	Jackson St.
Hamby Ave.	Main St.
Hamby Ave.	Marienfeld St.
Hamby Ave.	Tyler St.

ON	AT
Harlowe Dr.	Devonian Dr.
Harlowe Dr.	Mercedes Dr.
Harlowe Dr.	Monty Dr.
Harmony Dr.	Baumann Ave.
Harmony Dr.	Kansas Ave.
Harrier Dr.	Beachwood St.
Hart Ave.	Main St.
Hart Ave.	Marienfeld St.
Harvard Ave.	Cessna Dr.
Harvard Ave.	"D" St.
Harvard Ave.	Delmar St.
Harvard Ave.	"H" St.
Harvard Ave.	Idlewilde Dr.
Harvard Ave.	"L" St.
Harvard Ave.	Lanham St.
Harvard Ave.	Maberry St.
Harvard Ave.	"N" St.
Harvard Ave.	Whitney Dr.
Harvard Ave.	Woodcrest Dr.
Harvest Rain Ct.	Moroni St.
Harvest Rain St.	Ojibwa St.
Harvest Rain St.	Ridge View St.
Harvest Rain St.	Valley View St.
Hathaway Ct.	Heritage Blvd.
Haynes Ave.	Godfrey St.
Haynes Ave.	Lanham St.
Haynes Ave.	Norwood St.
Haynes Ave.	Skyline Dr.
Haynes Ave.	Ward St.
Haynes Dr.	Ward St.
Haynes Dr.	Whitney Dr.
Haywood Dr.	Prairie Ridge Dr.
Hazel Ln.	Carriage Rd.
Heartland Ave.	Hereford Blvd.
Heartland Ave./Ct.	Heritage Blvd.
Heather Rd.	Castleford Rd. (both intersections)
Henderson St.	Rochester St.
Hereford Blvd.	Crowley Blvd.
Hereford Blvd.	Grassland Blvd.
Heritage Blvd.	Crowley Blvd.
Heritage Blvd.	Grassland Blvd.
Heritage Blvd.	Heartland Ave./Ct.
Heritage Blvd.	Highland Blvd.
Heritage Oak Dr.	Frio Dr.
Hernandez Ave.	Holdridge Rd.
Hickory Ave.	Benton St.
Hickory Ave.	Edwards St.
Hickory Ave.	Lincoln St.
Hickory Ave.	Tyler St.
Hicks Ave.	Camp St.

ON	AT
Hicks Ave.	Jefferson St.
Hicks Ave.	Johnston St.
Hicks Ave.	Main St.
Hicks Ave.	Moran St.
Hicks Ave.	Terrell St.
High Noon Ct.	Stake Ave.
Highland Blvd.	Heritage Blvd.
Highsky Dr.	Hyde Park Ave.
Hill Ave.	Crestview Rd.
Hill Ave.	Holly Dr.
Hillcrest Ct.	Hereford Pl.
Hillcrest Ct.	Heritage Blvd.
Hillsboro Ct.	Meadowpark Dr.
Hilltop Dr.	Oriole Dr.
Hilltop Dr.	Riverside Dr.
Hodges St.	Community Ln.
Hodges St.	Neely Ave.
Hogan Ct.	Trevino St.
Hollandale Dr.	Carver St.
Hollandale Dr.	Parkway Dr.
Hollie Brook Pl.	Fairfield Ln.
Holloway Ave.	Clark St.
Holloway Ave.	"G" St.
Holloway Ave.	"H" St.
Holloway Ave.	Indiana Ave.
Holly Dr.	Raymond Rd.
Holly Dr.	Travis Ave.
Hollyberry Ln.	Bayberry Pkwy.
Holmsley St.	Marienfeld St.
Holmsley St.	Pecos St.
Homeland Ct. / Dr.	Homestead Blvd.
Homestead Blvd.	Hereford Blvd.
Homestead Blvd.	Homeland Ct.
Homestead Ct.	Homestead Blvd.
Honeysuckle Ln.	Corral Dr.
Honeysuckle Ln.	Lone Star Ln.
Hopi Ct.	Washita
Horizon Rd.	Meadowside St.
Horizon Rd.	Sunnyvale St.
Houston Ave.	Lee St.
Houston Ave.	Madison St.
Houston Ave.	Tyler St.
Howard Dr.(both intersections)	Raymond Rd.
Hoya Dr.	Rainbow Rd.
Hoya Dr.	Sunshine Pkwy.
Hudson Ave.	Pecan Ave.
Hughes St.	Fannin Ave.
Hughes St.	Neely Ave.
Humble Ave.	Cessna Dr.
Humble Ave.	Godfrey St.

ON	AT
Humble Ave.	Huntington St.
Humble Ave.	"I" St.
Humble Ave.	"L" St.
Humble Ave.	Lanham St.
Humble Ave.	Main St.
Humble Ave.	Marcie Ln.
Humble Ave.	Mark Ln.
Humble Ave.	McDonald St.
Humble Ave.	"N" St.
Humble Ave.	Tarleton St.
Humble Ave.	Upland St.
Humble Ave.	Western Dr.
Huntington St.	Neely Ave.
Husk St.	Carriage Rd.
Husk St.	Ranch Ave.
Hyde Park Ave.	Ferncliff Ave.
Hyde Park Ave.	Godfrey St.
Hyde Park Ave.	Greenbriar Dr.
Hyde Park Ave.	Tarleton St.
"I" St.	Cimmaron Ave.
"I" St.	College Ave.
"I" St.	Golf Course Rd.
"I" St.	Holloway Ave.
"I" St.	Indiana Ave.
"I" St.	Kentucky Ave.
"I" St.	Missouri Ave.
"I" St.	Neely Ave.
"I" St.	Washington Ave.
I-20 N. Frontage Rd.	Midkiff Rd.
I-20 S. Frontage Rd.	Midkiff Rd.
Idlewilde Dr.	Cuthbert Ave.
Idlewilde Dr.	Preston Dr.
Idlewilde Dr.	Ric Dr.
Idlewilde Dr.	Storey Ave.
Idlewilde Dr.	Sunshine Pkwy.
Illinois Ave.	Carver St.
Illinois Ave.	Lee St.
Illinois Ave.	Terrell St.
Illinois Ave.	Thomason Dr.
Imperial Ave.	Cimmaron Ave.
Imperial Ave.	Godfrey St.
Imperial Ave.	Tarlton St.
Independence	Chuck Wagon
Indiana Ave.	Carlton St.
Indiana Ave.	Carver St.
Indiana Ave.	"G" St.
Indiana Ave.	"L" St.
Indiana Ave.	Lee St.
Indiana Ave.	Marienfeld St.

ON	AT
Indigo Sky Ct.	Daybreak Way
Industrial Ave.	Carver St.
Industrial Ave.	Lee St.
Industrial Ave.	Main St.
Industrial Ave.	Marienfeld St.
Inwood Ct.	Ward St.
Iron Rd.	Ranch Ave.
Ironwood Dr.	Homestead Blvd.
Ironwood Dr.	Mosswood Dr.
Irwin Ct.	Crenshaw Dr.
Island Dr.	Greentree Blvd.
Island Dr.	Island Cir./Dr.
Island Dr. (northbound)	Island Cir./Dr.
Island Dr.	Rustic Tr.
Ivy Ct.	Rio Bravo St.
"J" St.	College Ave.
"J" St.	Community Ave.
"J" St.	Golf Course Rd.
"J" St.	Harvard Ave.
"J" St.	Holloway Ave.
"J" St.	Kentucky Ave.
"J" St.	Missouri Ave.
"J" St.	Washington Ave.
Jackson St.	Cherry Ln.
Jackson St.	Chestnut Ave.
Jackson St.	Cuthbert Ave.
Jackson St.	Garden Ln.
Jackson St.	Golf Course Rd.
Jackson St.	Illinois Ave.
Jackson St.	Indiana Ave.
Jackson St.	Jax Ave.
Jackson St.	Kentucky Ave.
Jackson St.	New York Ave.
Jackson St.	Nobles Ave.
Jackson St.	Parker Ave.
Jackson St.	Pennsylvania Ave.
Jackson St.	Texas Ave.
Jackson St.	Wall St.
Jackson St.	Walnut Ln.
Jackson St.	Washington Ave.
Jacotte Cir. (both intersections)	Golf Course Rd.
Jadewood Dr.	Homestead Blvd.
Jamestown St.	Arlington Rd.
Jamestown St.	Bunker Hill Rd.
Jax Ave.	Carver St.
Jax Ave.	Fort Worth St.
Jax Ave.	Main St.
Jax Ave.	Marienfeld St.
Jax Ave.	Terrell St.
Jax Ave.	Tilden St.

ON	AT
Jefferson St.	California Ave.
Jefferson St.	Gist Ave.
Jefferson St.	Indiana Ave.
Jefferson St.	Kentucky Ave.
Jefferson St.	New Jersey Ave.
Jefferson St.	New York Ave.
Jefferson St.	Pennsylvania Ave.
Jefferson St.	Wall St.
Jefferson St.	Washington Ave.
Jesse St.	Illinois Ave.
Jesse St.	Texas Ave.
Jesse St.	Wall St.
Johnston St.	Carter Ave.
Johnston St.	Francis Ave.
Johnston St.	Industrial Ave.
Johnston St.	Montgomery Ave.
Jordan Ave.	Godfrey Ct.
Jordan Ave.	Wedgewood St.
Jordy Rd.	Tower Rd.
Joy Dr.	Bentwood Dr.
July Fourth Rd.	Colony Rd.
July Fourth Rd.	Vanguard Rd.
July Fourth Rd.	Victory Pkwy.
Juniper Ct.	Teakwood Trace
"K" St.	Carter Ave.
"K" St.	College Ave.
"K" St.	Community Ln.
"K" St.	Cuthbert Ave.
"K" St.	Francis Ave.
"K" St.	Golf Course Rd.
"K" St.	Griffin Ave.
"K" St.	Holloway Ave.
"K" St.	Industrial Ave.
"K" St.	Missouri Ave.
"K" St.	Washington Ave.
Kanawha	Navajo
Kanawha	Pueblo
Kansas Ave.	Alpine St.
Kansas Ave.	Baird St.
Kansas Ave.	E. Broadway
Kansas Ave.	"C" St.
Kansas Ave.	Carrizo St.
Kansas Ave.	"D" St.
Kansas Ave.	Delmar St.
Kansas Ave.	"F" St.
Kansas Ave.	Fort Worth St.
Kansas Ave.	"G" St.
Kansas Ave.	Godfrey St.
Kansas Ave.	McDonald St.
Kansas Ave.	Main St.

ON	AT
Kansas Ave.	Marienfeld St.
Kansas Ave.	Pecos St.
Kansas Ave.	Terrell St.
Kansas Ave.	W. Broadway
Keith St.	Cowden Ave.
Keith St.	Eugene Ave.
Keith St.	George Ave.
Keith St.	Hamby Ave.
Keith St.	Hart Ave.
Keith St.	Humble Ave.
Keith St.	Jax Ave.
Keith St.	Nobles Ave.
Keith St.	Parker Ave.
Kelly St.	Travis Ave.
Kensington Ln.	Polo Pkwy.
Kent St.	Kansas Ave.
Kent St.	Louisiana Ave.
Kent St.	Michigan Ave.
Kentucky Ave.	"B" St.
Kentucky Ave.	Bankhead Hwy.
Kentucky Ave.	Benton St.
Kentucky Ave.	"C" St.
Kentucky Ave.	Carver St.
Kentucky Ave.	Clark St.
Kentucky Ave.	Clay St.
Kentucky Ave.	"D" St.
Kentucky Ave.	"E" St.
Kentucky Ave.	"G" St.
Kentucky Ave.	"H" St.
Kentucky Ave.	"K" St.
Kentucky Ave.	Lamesa Rd.
Kentucky Ave.	Lee St.
Kentucky Ave.	Lincoln St.
Kentucky Ave.	Main St.
Kentucky Ave.	Marienfeld St.
Kentucky Ave.	Pecos St.
Kentucky Ave.	Stonewall St.
Kentucky Ave.	Tilden St.
Kentucky Ave.	Tyler St.
Kentucky Ave.	Webster St.
Keri Ct.	Noel Ave.
Kerth St.	Ohio Ave.
Kessler Ave.	Crestview Rd.
Kessler Ave.	Powell St.
Keswick Rd.	Melville Dr.
Key St.	Brunson Ave.
Key St.	Kentucky Ave.
Key St.	Washington Ave.
Keystone Ct.	Gunnison Dr.
Killdeer Ct.	Beachwood St.

ON	AT
Kilyn Ct.	Beal Pkwy.
Kimbrough St.	Delano Ave.
King Kelly Ct.	Mac Dr.
King Richards Row	Oriole Dr.
Kingsboro Ct. (both intersections)	Meadowpark Dr.
Kingston Dr.	Southampton Ln.
Kingwood Ct.	Valwood Dr.
Kiowa Dr.	Eisenhower Dr.
Kiowa Dr.	Meadow Dr.
Kirkwood Dr.	Homeland Dr.
Knights Pl.	Castleford Rd.
"L" St.	Bedford Dr.
"L" St.	Carter Ave.
"L" St.	Cimmaron Ave.
"L" St.	College Ave.
"L" St.	Community Ave.
"L" St.	Cuthbert Ave.
"L" St.	Holloway Ave.
"L" St.	Humble Ave.
"L" St.	Kentucky Ave.
"L" St.	Louisiana Ave.
"L" St.	Michigan Ave.
"L" St.	Missouri Ave.
"L" St.	Neely Ave.
"L" St.	Shell Ave.
"L" St.	Sinclair Ave.
"L" St.	Stanolind Ave.
"L" St.	Warwick Pl.
"L" St.	Washington Ave.
La Force Blvd.	Sloan Field Blvd.
La Jolla Cv.	Guadalupe St.
La Salle Cir.	Mark Ln.
Lady Bird Ln.	Partridge St.
Laguna Meadows Tr.	Madrone Ave.
Laguna Meadows Tr.	San Felipe Dr.
Lamesa Rd.	Indiana Ave.
Lampasas Dr.	Heritage Oaks Dr.
Lancashire Rd.	Castleford Rd.
Lancashire Rd.	Polo Parkway
Landon Ct.	Blake Dr.
Lanham St.	Ainslee St.
Lanham St.	Cimmaron Ave.
Lanham St.	Cuthbert Ave.
Lanham St.	Dartmouth Dr.
Lanham St.	Fannin Ave.
Lanham St.	Haynes Ave.
Lanham St.	Kansas Ave.
Lanham St.	Louisiana Ave.
Lanham St.	Maxwell Dr.
Lanham St.	Neely Ave.

ON	AT
Lanham St.	Princeton Ave.
Lanham St.	Shandon Ave.
Lanham St.	Shell Ave.
Lanham St.	Storey Ave.
Lanham St.	Ward St.
Laughlin Ct.	Corral Dr.
Laura Dr.	Bentwood Dr.
Laura Dr.	Edgewood Dr.
Laura Dr.	Goliad Dr.
Lavaca Ave.	Conroe St.
Lavaca Ave.	Spence Dr.
Lawson St.	"D" St.
Lawson St.	"G" St.
Lawson Ave.	"H" St.
League Dr.	Crowley Blvd.
Learmont Dr.	Chapel Hill Dr.
Learmont Dr.	Keswick Rd.
Leather Ln.	Ivy Ct.
Leather Ln.	Southwest Ct.
Leatherwood Dr.	Honeysuckle Ln.
Leddy Dr.	Cedar Spring Dr.
Leddy Dr.	Edgewood Dr.
Leddy Dr.	Harlowe Dr.
Leddy Dr.	Mercedes Dr.
Lee St.	California Ave.
Lee St.	Garden Ln.
Lee St.	New York Ave.
Lee St.	South Ln.
Lee St.	Walnut Ln.
Legacy Oaks Ct.	Dunbarton Oaks Blvd.
Legends Blvd.	Wagner St./Dr.
Lehigh Dr.	Norwood St.
Leisure Dr.	Beal Pkwy.
Leisure Dr.	Bentwood Dr.
Leisure Dr.	Eisenhower Dr.
Leisure Dr.	Tradewinds Blvd.
Lennox Dr.	Fargo Ave.
Lennox Dr.	Westminster Dr.
Lexington St.	Concord Ave.
Liberty Ct.	Beal Pkwy.
Liberty Dr.	Starboard Dr.
Liddon Ave.	Bryant St.
Liddon Ave.	Keith St.
Liddon Ave.	Marienfeld St.
Lincoln St.	California Ave.
Lincoln St.	Cherry Ln.
Lincoln St.	Garden Ln.
Lincoln St.	Illinois Ave.
Lincoln St.	Indiana Ave.
Lincoln St.	New York Ave.

ON	AT
Lincoln St.	Oak Ave.
Lincoln St.	Orchard Ln.
Lincoln St.	Pecan Ave.
Lincoln St.	Pennsylvania Ave.
Lincoln St.	Pine Ave.
Lincoln St.	Texas Ave.
Lincoln St.	Wall St.
Lincoln St.	Washington Ave.
Lincoln St.	Willeys Ave.
Lincoln Green Ct.	Widener Strp.
Lindbergh Dr.	Banks Dr.
Lindbergh Dr.	Windecker St.
Lindbergh Dr.	Wright Dr.
Lindora Way	Sinclair Ave.
Lindora Way	Sunshine Pkwy.
Little John Ln.	Sherwood Dr.
Livingston St.	Rio Grande Ave.
Llano Ct.	Barton Creek Rd.
Llano Ct.	Crowley Blvd.
Llano Ct.	Frio Dr.
Llano Ct.	Los Patios Dr.
Llano Ct.	Rio Grande Ave.
Lockheed Dr.	Ainslee St.
Lockheed Ave.	Alpine St.
Lockheed Dr.	Boeing Dr.
Lockheed Dr.	Cessna Dr.
Lockheed Dr.	Culver Dr.
Lockheed Ave.	Denton St.
Lockheed Dr.	Lanham St.
Lockheed Dr.	Murray St.
Lockheed Dr.	Northrup Dr.
Lockheed Dr.	Sparks St.
Lockheed Dr.	Ward St.
Lockheed Dr.	Whitney Dr.
Locksley Ct.	Yorkshire Dr.
Logan Ct.	Beal Pkwy.
Logan Creek Rd.	Cooper Creek Rd.
Logan Creek Rd.	Stonebridge Dr.
Loma Dr.	Alta Ave.
Loma Dr.	Neely Ave.
Loma Dr.	Pecan Ave.
Loma Vista St.	Orchard Ln.
London Ct.	Yorkshire Dr.
Lone Oak	Peregrine Hill
Lone Oak	Sherwood Dr.
Lone Star Ln.	Buffalo Gap
Lone Star Ln.	Occidental Pkwy.
Lonesome Dove Ln.	Southwest St.
Longhorn Ln.	Montero Ln.
Longview Ave.	Baird St. (eastbound)

ON	AT
Longview Ave.	Baird St. (westbound)
Longview Ave.	Terrell St. (eastbound)
Loop 250 E. Frontage Rd.	Industrial Ave.
Loraine St.	California Ave.
Loraine St.	Collins Ave.
Loraine St.	Cowden Ave.
Loraine St.	Cuthbert Ave.
Loraine St.	Dakota Ave.
Loraine St.	Francis Ave.
Loraine St.	Gist Ave.
Loraine St.	Griffin Ave.
Loraine St.	Hamby Ave.
Loraine St.	Hicks Ave.
Loraine St.	Jax Ave.
Loraine St.	Kansas Ave.
Loraine St.	Louisiana Ave.
Loraine St.	Michigan Ave.
Loraine St.	Missouri Ave.
Loraine St.	New Jersey Ave.
Loraine St.	New York Ave.
Loraine St.	Pennsylvania Ave.
Loraine St.	Texas Ave.
Loraine St.	Wall St.
Loraine St.	Washington Ave.
Los Alamitos Dr.	Lancashire Rd.
Los Alamitos Ct.	Los Alamitos Dr.
Los Conchos Ln.	Avalon Dr.
Los Padres Dr.	Carmel Ct.
Los Padres Dr.	Los Patios Dr.
Los Patios Dr.	Crowley Blvd.
Los Patios Dr.	Holiday Hill Rd.
Louisiana Ave.	Alpine St.
Louisiana Ave.	Delmar St.
Louisiana Ave.	Lamesa Rd.
Louisiana Ave.	Main St.
Louisiana Ave.	McDonald Dr.
Lumina Dr.	Sunrise Way
Lynn Ave.	Carver St.
Lynn Ave.	Cottonwood Ave.
Lynn Ave.	Jackson St.
Lynn Ave.	Tyler St.
"M" St.	Brunson Ave.
"M" St.	College Ave.
"M" St.	Holloway Ave.
"M" St.	Indiana Ave.
"M" St.	Kentucky Ave.
"M" St.	Louisiana Ave.
"M" St.	Michigan Ave.
"M" St.	Missouri Ave.
"M" St.	Ohio Ave.

ON	AT
"M" St.	Washington Ave.
Maberry St.	Cimmaron Ave.
Maberry St.	Country Club Dr.
Maberry St.	Cuthbert Ave.
Maberry St.	Fannin Ave.
Maberry St.	Frontier Dr.
Maberry St.	Kansas Ave.
Maberry St.	Neely Ave.
Maberry St.	Sinclair Ave.
Maberry St.	Storey Ave.
Mac Dr.	Mile High Ln.
Mac Dr.	Spahn St.
Madison St.	California Ave.
Madison St.	Garden Ln.
Madison St.	Illinois Ave.
Madison St.	Indiana Ave.
Madison St.	Industrial Ave.
Madison St.	Kentucky Ave.
Madison St.	New York Ave.
Madison St.	South Ln.
Madison St.	Wall St.
Madison St.	Walnut Ln.
Madrone Ave.	Pavilion Pkwy.
Madrone Ave.	Stonebridge Dr.
Magnolia Ave.	Benton St.
Magnolia Ave.	Butternut Ln.
Magnolia Ave.	Edwards St.
Magnolia Ave.	Lincoln St.
Magnolia Ave.	Peterson St.
Maid Marian Ct.	Sherwood Dr.
Main St.	Cuthbert Ave.
Main St.	Gist Ave.
Main St.	Golf Course Rd.
Main St.	Scharbauer Dr.
MaMar Ave.	Cessna Dr.
Mann St.	Kentucky Ave.
Manor Ct.	Douglas Dr.
Manor St.	Cuthbert Ave.
Manor St.	Douglas Dr.
Manor St.	Storey Ave.
Maple Ave.	Benton St.
Maple Ave.	Butternut Ln.
Maple Ave.	Edwards St.
Maple Ave.	Lincoln St.
Maple Ave.	Peterson St.
Maple Ave.	Tyler St.
Marantha Pl.	Dengar Ave.
Marfa Ln.	Tin Tr.
Mariana Ave.	Michigan Ave.
Mariana Ave.	Ohio Ave.

ON	AT
Mariana Ave.	Powell St.
Mariana Ave.	Roosevelt Ave.
Marienfeld St.	Carter Ave.
Marienfeld St.	Cowden Ave.
Marienfeld St.	Cuthbert Ave.
Marienfeld St.	Dakota Ave.
Marienfeld St.	Louisiana Ave.
Marienfeld St.	Michigan Ave.
Marienfeld St.	Missouri Ave.
Marienfeld St.	Nobles Ave.
Marienfeld St.	Ohio Ave.
Marienfeld St.	Parker Ave.
Mark Ln.	Dengar Ave.
Mark Ln.	Neely Ave.
Mark Ln.	Sinclair Ave.
Mark Ln.	St. Andrews Dr.
Mark Ln.	Whittle Way
Market St.	I-20 N. Frontage Rd.
Market St.	Industrial Ave.
Marmon Dr.	Maxwell Dr.
Marmon Dr.	Ward St.
Marmon Dr.	Whitney Dr.
Marshall St.	California Ave.
Marshall St.	Gist Ave.
Marshall St.	Hicks Ave.
Marshall St.	Indiana Ave.
Marshall St.	Kentucky Ave.
Marshall St.	New York Ave.
Marshall St.	Pennsylvania Ave.
Marshall St.	Texas Ave.
Marshall St.	Wall St.
Marshall St.	Washington Ave.
Mathis St.	Briarwood Ave.
Mathis St.	Canadian Ave.
Mathis St.	Spence Dr.
Maverick Ln.	Cattleman Dr.
Maverick Ln.	Cowboy Dr.
Maxwell Dr.	Lanham St.
Maxwell Dr.	Ward St.
Maxwell Dr.	Whitney Dr.
Mayfield Pl.	Mockingbird Ln.
McClintic St.	Community Ave.
McClintic St.	Neely Ave.
McClintic St.	Southgate St.
McDonald Dr.	Bedford Ave.
McDonald Dr.	Cedar Spring Dr.
McDonald Dr.	Cimmaron Ave.
McDonald Dr.	Cuthbert Ave.
McDonald Dr.	Gulf Ave.
McDonald Dr.	Neely Ave.

ON	AT
McDonald Dr.	Ohio Ave.
McDonald Dr.	Kansas Ave.
McDonald Dr.	Shell Ave.
McDonald Dr.	Spraberry Dr.
McDonald Dr.	Tanner Dr.
McDonald St.	Greenbriar Dr.
McGarvey St.	Kentucky Ave.
McKenzie St.	Carter Ave.
McKenzie St.	Francis Ave.
McKenzie St.	Griffin St.
McKenzie St.	Montgomery Ave.
McKenzie St.	New Jersey Ave.
McKenzie St.	Taylor Ave.
McPherson Ln.	Bunker Hill Rd.
McPherson Ln.	Musket Dr.
Meadow Dr.	Anetta Dr.
Meadow Dr.	Brookdale Dr.
Meadow Dr.	Comanche Dr.
Meadow Dr.	Erie Dr.
Meadow Dr.	Graceland Dr.
Meadow Dr.	Parkdale Dr.
Meadow Dr.	Pasadena Dr.
Meadow Dr.	Pleasant Dr.
Meadowbrook Dr.	Moss Ave.
Meadowlark Ln.	Oriole Dr.
Meadowridge Ln.	Arroyo Dr.
Meadowridge Ln.	Skyline Dr.
Meadowwood Ct.	Spring Meadow Ct.
Medina Dr.	Barton Creek Rd.
Medina Dr.	Sabine Dr.
Megan Ct.	Garrett Dr.
Mel Ott Ln.	Mile High Ln.
Mel Ott Ln.	Spahn St.
Melville Dr.	Bluebird Ln.
Melville Dr.	Faulkner Dr.
Memorial Ct.	Riverfront Dr.
Mercedes Dr.	Devonian Dr.
Mercedes Dr.	Eisenhower Dr.
Meredith Pl.	Concho Dr.
Merrill Dr.	Norwood St.
Merrill Dr. / Ct.	Stratton Dr.
Mesa Dr.	Storey Ave.
Mesquite Ln.	Jackson St.
Mesquite Ln.	Lee St.
Mesquite Ln.	Lincoln St.
Mesquite Ln.	Tyler St.
Metz Ct.	Ward St.
Metz Dr.	Ward St.
Metz Dr.	Whitney Dr.
Metz Pl.	Lanham St.

ON	AT
Michigan Ave.	Alpine St.
Michigan Ave.	Delmar St.
Michigan Ave.	Godfrey St.
Michigan Ave.	Kent St.
Michigan Ave.	Lamesa Rd.
Michigan Ave.	Main St.
Michigan Ave.	McDonald St.
Michigan Ave.	Powell St.
Michigan Ave.	Terrell St.
Midkiff Rd.	Bluebird Ln.
Midkiff Rd.	I-20 N. Frontage Rd.
Midkiff Rd.	I-20 S. Frontage Rd.
Midkiff Rd.	Mockingbird Ln.
Midland Dr.	U.S. 80 Service Rd.
Mile High Ln.	Wagner Dr.
Miller Dr.	Crenshaw Dr.
Miller Dr./Ct.	Trevino St.
Milltown Rd.	Cooper Creek Rd.
Milltown Rd.	Stonebridge Dr.
Mimosa Ct.	Rosewood Dr.
Mineola St.	California Ave.
Mineola St.	Gist Ave.
Mineola St.	Hicks Ave.
Mineola St.	Indiana Ave.
Mineola St.	Kentucky Ave.
Mineola St.	New Jersey Ave.
Mineola St.	New York Ave.
Mineola St.	Pennsylvania Ave.
Mineola St.	Texas Ave.
Mineola St.	Wall St.
Mineola St.	Washington Ave.
Minuteman Rd.	Anthem Rd.
Mission Ct.	Godfrey St.
Mississippi Ave.	Baird St.
Mississippi Ave.	Dallas St.
Mississippi Ave.	Terrell St.
Missouri Ave.	"A" St.
Missouri Ave.	Carver St.
Missouri Ave.	Colorado St.
Missouri Ave.	"G" St.
Missouri Ave.	Jefferson St.
Missouri Ave.	Lee St.
Missouri Ave.	Loraine St.
Missouri Ave.	Madison St.
Missouri Ave.	Main St.
Missouri Ave.	Marienfeld St.
Missouri Ave.	Marshall St.
Missouri Ave.	Mineola St.
Mitchell St.	Delano Ave.
Mitchell St.	Franklin Ave.

ON	AT
Mockingbird Ln.	"A" St.
Mockingbird Ln.	Avalon Dr.
Mockingbird Ln.	Fairgrounds Rd.
Mockingbird Ln.	Midkiff Rd.
Mockingbird Ln.	Oriole Dr.
Mogford St.	Cimmaron Ave.
Mogford St.	Cuthbert Ave.
Mogford St.	Dengar Ave.
Mogford St.	Fannin Ave.
Mogford St.	Humble Ave.
Mogford St.	Kansas Ave.
Mogford St.	Lockheed Dr.
Mogford St.	Louisiana Ave.
Mogford St.	Michigan Ave.
Mogford St.	Neely Ave.
Mogford St.	Princeton Ave.
Mogford St.	Shandon Ave.
Mogford St.	Shell Ave.
Mogford St.	Sinclair Ave.
Mogford St.	Storey Ave.
Montero Ln.	Avalon Dr.
Montgomery Ave.	Belmont St.
Montgomery Ave.	Camp St.
Montgomery Ave.	Main St.
Monty Dr.	Leddy Dr.
Monty Dr.	McDonald St.
Monty Dr.	Mercedes Dr.
Monty Dr.	Raymond Rd.
Moonlight Rd.	Husk St.
Moran St.	Carter Ave.
Moran St.	Collins St.
Moran St.	Dakota Ave.
Moran St.	Francis St.
Moran St.	Griffin Ave.
Moran St.	Industrial Ave.
Moran St.	Marlin St.
Moran St.	Montgomery Ave.
Moran St.	New Jersey Ave.
Moran St.	Taylor Ave.
Morgan Way	English Dr.
Morgan Way	Golf Course Rd.
Moroni St.	Lumina Ct.
Moroni St.	Overshine Ln.
Moss Ave.	Ward St.
Moss Ave.	Whitney Dr.
Mosswood Dr.	Brandy Hill Rd.
Mosswood Dr.	Homestead Blvd.
Mountain Quail Rd.	Scaled Quail Rd.
Mulberry Ln.	Madison St.
Mulberry Ln.	San Andres Dr.

ON	AT
Murray St.	Princeton Ave.
Musial Way	Avalon Dr.
Musial Way	O'Rourke St.
"N" St.	Bedford Dr.
"N" St.	Brunson Ave.
"N" St.	Carter Ave.
"N" St.	College Ave.
"N" St.	Community Ln.
"N" St.	Country Club Dr.
"N" St.	Cuthbert Ave.
"N" St.	Harvard Ave.
"N" St.	Holloway Ave.
"N" St.	Humble Ave.
"N" St.	Indiana Ave.
"N" St.	Kentucky Ave.
"N" St.	Louisiana Ave.
"N" St.	Michigan Ave.
"N" St.	Missouri Ave.
"N" St.	Neely Ave.
"N" St.	New Jersey Ave.
"N" St.	Rhode Island Ave.
"N" St.	Seaboard Ave.
"N" St.	Sinclair Ave.
"N" St.	Southgate St.
"N" St.	Washington Ave.
Nash Ave.	Copus St.
Nash Ave.	Hudson Ave.
Nassau Ct.	Geraldine St.
Nassau Dr.	Geraldine St.
Nasworthy Pl.	Rio Grande Ave.
Navajo Rd.	Shawnee
Navasota Dr.	Frio Dr.
Navasota Dr.	Llano Ct.
Navasota Dr.	Oak Creek Dr.
Navasota Dr.	Pedernales Dr.
Navasota Dr.	Rio Grande Ave.
Navasota Dr.	Sabine Dr.
Neely Ave.	Godfrey St.
Neely Ave.	"I" St.
Neely Ave.	Tarleton St.
Neely Ave.	Ward St.
Neely Ave.	Whittle Way
Neely Ave.	Wydewood Dr.
Neely Ct.	Neely Ave.
Neely Service Rd.	Cumberland Dr.
Neely Service Rd.	"D" St.
Neely Service Rd.	Oaklawn Dr.
Nevan Ct.	Beal Pkwy.
New Jersey Ave.	Camp St.
New Jersey Ave.	Johnston St.

ON	AT
New Jersey Ave.	"L" St.
New Jersey Ave.	Main St.
New Jersey Ave.	Marshall St.
New Jersey Ave.	McKenzie St.
New Jersey Ave.	Terrell St.
New Jersey Ave.	Wayside Dr.
New York Ave.	Calhoun St.
New York Ave.	Carver St.
New York Ave.	Clay St.
New York Ave.	Industrial Ave.
New York Ave.	Main St.
New York Ave.	Marienfeld St.
New York Ave.	Tilden St.
Newcastle Dr.	Wellington Ct.
Nicklaus St.	Crenshaw Dr.
Nobles Ave.	Carver St.
Nobles Ave.	Edwards St.
Nobles Ave.	Main St.
Nobles Ave.	Pecos St.
Nobles Ave.	Tilden St.
Noel Ave.	Lanham St.
Noel Ave.	Ward St.
Nolan Ryan Dr.	Legends Blvd.
Norman	Bankhead Hwy.
Normandy Ln.	Polo Pkwy.
Normandy Ln.	Stoneleigh Dr.
North Service Rd.	Windecker St.
Northcrest Dr.	Hilltop Dr.
Northfield Ct.	Godfrey St.
Northfield Dr.	Godfrey St.
Northfield Dr.	Skyline Dr.
Northgate Ave.	Briarwood Ave.
Northgate Ave.	Northcrest Dr.
Northrup Dr.	Fannin Ave.
Northrup Dr.	Neely Ave.
Northrup Dr.	Princeton Dr.
Northrup Dr.	Sentinel Dr.
Northtown Ct.	Lanham St.
Northtown Pl.	Meadowbrook Dr.
Northtown Pl.	Whitney Dr.
Norwood St.	Lehigh Dr.
Norwood St.	St. Andrews Dr.
Nottingham Ln.	Sherwood Ln.
Nottingham Ln.	Widener Strp.
"O" St.	Missouri Ave.
Oak Ave.	Benton St.
Oak Ave.	Butternut Ln.
Oak Ave.	Main St.
Oak Valley Dr.	Greathouse Ave.
Oak Valley Dr.	Oriole St.

ON	AT
Oak Valley Dr.	Spence Dr.
Oaklawn Dr.	Humble Ave.
Oaklawn Dr.	Neely Ave.
Oaklawn Dr.	Stanolind Ave.
Oaklawn Dr.	Ventura Ave.
Oakmont Dr.	Tremont Ave.
Oakmont Dr.	Whittle Way
Oakridge Dr. / Ct.	Gateway St.
Ohio Ave.	Alpine St.
Ohio Ave.	Baird St.
Ohio Ave.	"C" St.
Ohio Ave.	Carrizo St.
Ohio Ave.	"D" St.
Ohio Ave.	Delmar St.
Ohio Ave.	"F" St.
Ohio Ave.	Fort Worth St.
Ohio Ave.	"G" St.
Ohio Ave.	Godfrey St.
Ohio Ave.	"L" St.
Ohio Ave.	Main St.
Ohio Ave.	Marienfeld St.
Ohio Ave.	Mineola St.
Ohio Ave.	"N" St.
Ohio Ave.	Powell St.
Ohio Ave.	Weatherford St.
Ojibwa St.	Daybreak Way
Ojibwa St.	Overshine Ln.
Ojibwa	Pueblo
Ojibwa	Tejas
Olympic Ct.	Candlestick Dr.
Onyx Dr.	Farm-to-Market Rd. 1788
Orchard Ln.	Carver St.
Orchard Ln.	Lee St.
Oriental Ave.	Ventnor Ave.
Oriole Dr.	Mockingbird Ln.
Oriole Dr.	Tanforan Ave.
Oriole Dr.	Teakwood Trc.
Osage St.	Spruce Ave.
Osprey Dr.	Beachwood St.
Osprey Dr.	Flicker Dr.
Outlaw Ct.	Husk St.
Overshine Ln.	Fairgrounds Rd.
Overshine Ln.	Harvest Rain St.
Overshine Ln.	Sunrise Way
Oxford St.	Ohio Ave.
Pacific Ave.	Boardwalk
Pacific Ave.	Carver St.
Pagewood Dr.	Prairie Ridge Dr.
Palmer Dr.	Nicklaus St.
Paradise Ln.	Island Dr.

ON	AT
Park Ln.	Holly Dr.
Park Ln.	Tanner Dr.
Parker Ave.	Carver St.
Parker Ave.	Main St.
Parker Ave.	Tilden St.
Parker Ave.	Tyler St.
Parkhurst Dr.	Fargo Ave.
Parkhurst Dr.	Westminster Dr.
Parkwood Dr.	Brownwood Dr.
Parton Way	Mayfield Pl.
Parton Way	Whitman Dr.
Partridge St.	Baron Dr.
Partridge St.	Moonlight Rd.
Partridge St.	Outlaw Ct.
Partridge St.	Tin Tr.
Partridge St.	Wagon Ct.
Pasadena Dr.	Eisenhower Dr.
Pasadena Dr.	Spraberry Dr.
Patman Pl.	Concho Dr.
Patrick Pl.	Mayfield Pl.
Patrick Pl.	Semper Fidelis
Patriot Pkwy.	Avalon Dr.
Pavilion Pkwy.	San Felipe Dr.
Pavilion Pkwy.	Stonebridge Dr.
Peach St.	Kessler Ave.
Pebble Ct.	Bent Tree Tr.
Pecan Ave.	Cumberland Dr.
Pecan Ave.	"D" St.
Pecan Ave.	"I" St.
Pecan Ave.	"L" St.
Pecan Ave.	Main St.
Pecan Ave.	Oaklawn Dr.
Pecan Ave.	Pecos St.
Pecan Ave.	Pine Ave.
Pecan Ave.	Tyler St.
Peck Ave.	Baird St. (westbound)
Peck Ave.	Terrell St. (eastbound)
Pecos St.	Boyd Ave.
Pecos St.	Cuthbert Ave.
Pecos St.	Dormard Ave.
Pecos St.	Indiana Ave.
Pecos St.	Industrial Ave.
Pecos St.	Liddon Ave.
Pecos St.	Louisiana Ave.
Pecos St.	Michigan Ave.
Pecos St.	Missouri Ave.
Pecos St.	Neely Ave.
Pecos St.	Ohio Ave.
Pecos St.	Spruce Ave.
Pecos St.	Storey Ave.

ON	AT
Pecos St.	Tennessee Ave.
Pedernales Dr.	Crowley Blvd.
Pedernales Dr.	Lampasas Dr.
Pedernales Dr.	Llano Ct.
Pedernales Dr.	Medina Dr.
Pedernales Dr.	San Saba Ave.
Pennsylvania Ave.	Atlanta St.
Pennsylvania Ave.	Baird St.
Pennsylvania Ave.	Benton St.
Pennsylvania Ave.	Camp St.
Pennsylvania Ave.	Carver St.
Pennsylvania Ave.	Clay St.
Pennsylvania Ave.	Jackson St.
Pennsylvania Ave.	Lamesa Rd.
Pennsylvania Ave.	Main St.
Pennsylvania Ave.	Marienfeld St.
Pennsylvania Ave.	Tilden St.
Pennsylvania Ave.	Tyler St.
Pentagon Rd.	Commonwealth Rd.
Peregrine Hill	Delaney
Permian Ct.	Manor St.
Peterson St.	Oak Ave.
Peterson St.	Pecan Ave.
Phillip Pl.	Preston Dr.
Pilot Ave.	La Force Blvd.
Pilot Ave.	Wright Dr.
Pimlico Dr.	Tattenham Corner
Pine Ave.	Cumberland Dr.
Pine Ave.	“T” St.
Pine Ave. (westbound only)	“L” St.
Pine Ave.	Loma Dr.
Pine Ave.	Main St.
Pine Ave.	Neely Ave.
Pine Ave.	Oaklawn Dr.
Pine Ave.	Pecos St.
Pine Ave.	Peterson St.
Pine Meadow Dr.	Meadowpark Dr.
Pinemont Dr.	Springmont Dr.
Pinemont Dr.	Tremont Ave.
Pinewood Ct.	Pine Meadow Dr.
Pinion Ct.	Sunburst Dr.
Pioneer Cir. (both intersections)	Ranch Ave.
Pioneer Rd.	Ranch Ave.
Pioneer Rd.	Rio Pl.
Placid Ct.	Manor St.
Player Ct.	Trevino St.
Plaza St.	E. Circle Dr.
Pleasant Dr.	Bentwood Dr.
Pleasant Dr.	Eisenhower Dr.
Pleasant Dr.	Raymond Rd.

ON	AT
Pleasant Dr.	Waverly Dr.
Pliska Dr.	North Service Rd.
Polo Club Dr.	Bluebird Ln.
Polo Club Dr.	Polo Pkwy.
Polo Parkway	Lancashire Dr.
Porterfield Rd.	Cooper Creek Rd.
Porterfield Rd.	Stonebridge Dr.
Potomac Pkwy.	Victory Pkwy.
Powell St.	Kansas Ave.
Powell St.	Louisiana Ave.
Powell St. (northern most intersection only)	Mariana Ave.
Prairie Rd.	Cattleman Dr.
Prairie Rd.	Cowboy Dr.
Prairie Ridge Dr.	Jadewood Dr.
Pratt St.	Carter Ave.
Pratt St.	Dakota Ave.
Pratt St.	Francis Ave.
Pratt St.	New Jersey St.
Pratt St.	Taylor Ave.
Preston Dr.	Aspen Dr.
Preston Dr.	Sunburst Dr.
Preston Dr.	Whittle Way
Preston Dr.	Wydewood Dr.
Princeton Ave.	Alpine St.
Princeton Ave.	Austin St.
Princeton Ave.	"B" St.
Princeton Ave.	Boeing Dr.
Princeton Ave.	Cessna Dr.
Princeton Ave.	"D" St.
Princeton Ave.	Delmar St.
Princeton Ave.	Denton St.
Princeton Ave.	"G" St
Princeton Ave.	Godfrey St.
Princeton Ave.	Idlewilde Dr.
Princeton Ave.	"J" St.
Princeton Ave.	"L" St.
Princeton Ave.	Maberry St.
Princeton Ave.	McDonald St.
Princeton Ave.	"N" St.
Princeton Ave.	Tarleton St.
Princeton Ave.	Ward St.
Princeton Ave.	Whitney Dr.
Princeton Ave.	Woodcrest Dr.
Purple Sage Trl.	Whitman Dr.
Pylant St.	Ohio Ave.
Queens Ct.	Sherwood Dr.
Quicksand Dr.	Mathis St.
Quicksand Dr.	Spence Dr.
Racquet Club Dr.	Cimmaron Dr.
Racquet Club Dr.	Neely Ave.

ON	AT
Radcliff Ct.	Greenbriar Dr.
Railea Ct.	Beal Pkwy.
Rainbow Rd.	Idlewilde Dr.
Rainbow Rd.	Sunburst Dr.
Raiz Dr.	Laguna Meadows Tr.
Raiz Dr.	Pavilion Pkwy.
Ranch Ave.	Tin Tr.
Ranch Hand Dr.	Maverick Ln.
Randolph Ln.	Cowboy Dr.
Randolph Ln.	Ranch Hand Dr.
Rangers Ct.	Candlestick Dr.
Raymond Rd.	Anetta Dr.
Raymond Rd. (southernmost intersection)	Canyon Dr.
Reading Ave.	Stratton Dr.
Rebel Dr.	Cimmaron Ave.
Rebel Dr.	Godfrey St.
Red River Ln.	Cattleman Dr.
Red River Ln.	Cowboy Dr.
Redbud Ct.	Randolph Ln.
Redwood Run	Teakwood Trc.
Rees Ln.	Dengar Ave.
Rees Ln.	Neely Ave.
Reeves Cir.	Anetta Dr.
Regal Pl.	Everglade Ave.
Reo Dr.	Auburn Dr.
Republic Dr.	Brand Ln.
Republic Dr.	Rattler Ln.
Revere Pl.	Gallantry Ln.
Revolution Dr. (both intersections)	Brand Ln.
Rex Rd.	Brown Heart Ln.
Rex Rd.	George Yard Ln.
Rhett Dr.	Stonebridge Dr.
Rhett Dr.	Torrey Vista Dr.
Rhode Island Ave.	Camp St.
Rhode Island Ave.	Colorado St.
Rhode Island Ave.	Connell St.
Rhode Island Ave.	Johnston St.
Rhode Island Ave.	"L" St.
Rhode Island Ave.	McKenzie St.
Rhode Island Ave.	Moran St.
Rhode Island Ave.	Pratt St.
Ric Dr.	Bentwood Dr.
Ric Dr.	Edgewood Dr.
Ric Dr.	Stoneybrook Dr.
Ric Dr.	Storey Ave.
Richmond Dr. / Ct.	Castleford Rd.
Ridgeboro Ct.	Ridgefield Ct.
Ridgemont Pl.	Hereford Blvd.
Ridgemont Ct.	Heritage Blvd.
Ridgeway Rd.	Meadowside St.

ON	AT
Ridgeway Rd.	Sunnyvale St.
Ridglea Dr.	Cuthbert Ave.
Ridglea Dr.	Nobles Ave.
Ringo Ct	Carriage Rd.
Ringo Ct.	Draw Ct.
Rio Pl.	Carriage Rd.
Rio Pl.	Ranch Ave.
Rio Pl.	Stake Ave.
Rio Bravo St.	Ranch Ave.
Rio Bravo St.	Southwest St.
Rio Grande Ave.	Crowley Blvd.
Rio Grande Ave.	Frio Dr.
Rio Grande Dr.	Amistad Dr.
Rio Grande Dr.	Conroe St.
Riverfront Dr.	Wagner Dr.
Riverside Dr.	Brown Heart Ln.
Riverside Dr.	Holiday Hill Rd.
Riverside Dr.	Oak Valley Dr.
Robin Ln.	Oriole Dr.
Robin Hood Ct.	Sherwood Dr.
Rochester St.	Bankhead Hwy.
Rockwood Dr.	Tanforan Ave./Ct.
Rockylane Dr.	Leisure Dr.
Rodeo St.	Cerrillos Ave.
Rodeo St.	E. Mockingbird Ln.
Roosevelt Ave.	Mitchell St.
Roosevelt Ave.	Powell St.
Roosevelt Dr.	Crestview Rd.
Roosevelt Dr.	Edgewood Dr.
Roosevelt Dr.	Leddy Dr.
Roosevelt Dr.	McDonald Dr.
Roosevelt Dr.	Mercedes Dr.
Roosevelt Dr.	Raymond Rd.
Rope St.	Mockingbird Ln.
Rosemont Dr.	Sagemont Dr.
Rosemont Dr.	Tremont Ave.
Rosewood Dr.	Lemonwood Dr.
Rosewood Dr.	Northcrest Dr.
Rosewood Dr.	Oriole Dr.
Rosita Dr.	Alicia Ct.
Ruby Dr.	Canyon Dr.
Ruby Dr.	Raymond Rd.
Ruidoso Ct.	Mark Ln.
Russell Dr.	Norwood St.
Russell Dr. / Ct.	Stratton Dr.
Rustic Trail	Greentree Blvd. (at east and west intersections)
Sabine Dr.	Crowley Blvd.
Saddle Ct.	Burnett Ln.
Saddle Horn Ln.	Avalon Dr.

ON	AT
Saddle Horn Ln.	Longhorn Ln.
Sage St.	Hollandale Dr.
Sagebrush Rd.	Meadowside St.
Sagebrush Rd.	Sunnyvale St.
Sagemont Dr.	Pinemont Dr.
Sagemont Dr.	Tremont Ave.
Salisbury Pl.	Trinity Dr.
Saltillo Ct.	Camino Reale
San Angelo St.	Louisiana Ave.
San Angelo St.	Michigan Ave.
San Angelo St.	Tennessee Ave.
San Antonio Ave.	Amistad Dr.
San Antonio Ave.	Conroe St.
San Antonio Ave.	Spence Dr.
San Bernard Dr.	Pedernales Dr.
San Carlos Ct.	San Clemente Dr.
San Clemente Dr.	Guadalupe St.
San Clemente Dr.	Llano Ct.
San Diego Ct.	Frio Dr.
San Francisco Ave.	Baca St.
San Francisco Ave.	Magellan St.
San Francisco Ave.	Rodeo St.
San Miguel Ave. / Ct.	Magellan St.
San Miguel Ave.	San Francisco Ave.
San Pedro	Briarwood Ave.
San Pedro	Frio Dr.
San Pedro Ct.	Camino Reale
San Saba Ave.	Crowley Blvd.
Sand Hill Cr.	Vista West Pkwy.
Sandelwood St.	Baumann Ave.
Sandelwood St.	Kansas Ave.
Sands St.	Gulf Ave.
Sandstone Dr.	Green Tree Blvd
Sandstone Dr.	Sherwood Dr.
Santa Clara Dr.	Pavilion Pkwy.
Santa Clara Dr.	Stonebridge Dr.
Santa Clarita	Corona
Santa Clarita	San Pedro
Santa Rosa	Briarwood Ave.
Santa Rosa	Frio Dr.
Savoy Pl.	Mayfield Pl.
Savoy Pl.	Whitman Dr.
Scaled Quail Rd.	Valley Quail Rd.
Scenic Rd.	Meadowside St.
Scenic Rd.	Sunnyvale St.
Scharbauer Dr.	Main St.
Scottsboro Ln.	Rustic Tr.
Seaboard Ave.	Cessna Dr.
Seaboard Ave.	Godfrey St.
Seaboard Ave.	"H" St.

ON	AT
Seaboard Ave.	Huntington St.
Seaboard Ave.	"I" St.
Seaboard Ave.	"L" St.
Seaboard Ave.	Lanham St.
Seaboard Ave.	Mogford St.
Seaboard Ave.	"N" St.
Seaboard Ave.	Tarleton St.
Seaboard Ave.	Whitney Dr.
Seattle Slew Tr.	Sir Barton Pkwy.
Secor St.	Ohio Ave.
Secretariat St.	Affirmed Ave.
Secretariat St. (both intersections)	Sir Barton Pkwy.
Sedona	Frio Dr.
Seminole Dr.	Eisenhower Dr.
Semper Fidelis	Chelsea Pl.
Semper Fidelis	Fairfield Ln.
Sentinel Ave.	Alpine St.
Sentinel Ave.	Delmar St.
Sentinel Ave.	Denton St.
Sentinel Ave.	Tarleton St.
Sentinel Ave.	Upland St.
Sentinel Dr.	Maberry St.
Sentinel Dr.	Murray St.
Sentinel Dr.	Whitney Dr.
Sequoia St.	Green Tree Blvd.
Shady Oak Ct.	Teakwood Trace
Shadybrook Rd.	Meadowside St.
Shadybrook Rd.	Sage Brush Rd.
Shadylane Dr.	Bentwood Dr.
Shadyview Pl.	Tanforan Ave.
Shandon Ave.	Cimmaron Ave.
Shandon Ave.	Godfrey St.
Shandon Ave.	Lanham St.
Shandon Ave.	Loma Dr.
Shandon Ave.	Main St.
Shandon Ave.	Mogford St.
Shandon Ave.	Pecos St.
Shandon Ave.	Tarleton St.
Shandon Ave.	Ward St.
Shandon Ave.	Whitney Dr.
Shawnee	Pueblo
Shawnee	Wrangler Ln.
Shell Ave.	"C" St.
Shell Ave.	"D" St.
Shell Ave.	Godfrey St.
Shell Ave.	Huntington St.
Shell Ave.	"I" St.
Shell Ave.	"L" St.
Shell Ave.	"N" St.
Shell Ave.	McDonald St. (westernmost

ON	AT
	intersection)
Shell Ave.	Sparks St.
Shell Ave.	Tarleton St.
Shell Ave.	Upland St.
Sherwood Dr.	Oriole Dr.
Sherwood Dr.	Sandstone Dr.
Shirley Ln.	"D" St.
Shirley Ln.	Oaklawn Dr.
Shirley Ln.	Cumberland Dr.
Silverton Dr.	Gunnison Dr.
Silverton Dr.	Durango Dr.
Sinclair Ave.	"C" St.
Sinclair Ave.	Cessna Dr.
Sinclair Ave.	Culver Dr.
Sinclair Ave.	"D" St.
Sinclair Ave.	Godfrey St.
Sinclair Ave.	Holdridge Rd.
Sinclair Ave.	Hughes St.
Sinclair Ave.	Huntington St.
Sinclair Ave.	Lanham St.
Sinclair Ave.	Lindora Way / Woodcrest Dr.
Sinclair Ave.	McDonald St.
Sinclair Ave.	"N" St.
Sinclair Ave.	Northrup Drive
Sinclair Ave.	Pecos St.
Sinclair Ave.	Sparks St.
Sinclair Ave.	Tarleton St.
Sinclair Ave.	Upland St.
Sinclair Ave.	Ward St.
Sinclair Ave.	Wydewood Dr.
Sioux Ct.	Kanawha
Sir Barton Pkwy.	Alysheba Ln.
Sister Creek	Fall Creek
Sister Creek	Woodrose
Six Flags	Big Bend Country
Skyline Dr.	Haynes Ave.
Skyline Dr.	Northfield Dr.
Skyview Rd.	Meadowside St.
Skyview Rd.	Sunnyvale St.
Skywood Cr. (west intersection)	Meadowpark Dr.
Smith Rd. (both intersections)	Desta Dr.
Solomon Ln.	"A" St.
Solomon Ln.	Lamesa Rd.
Solomon Ln.	Stonebridge Dr.
Solana	Santa Clarita
South St.	Carver St.
South St.	Lamesa Rd.
Southampton Ln.	Newcastle Dr.
Southwest St.	Carriage Rd.
Sparhawk Dr.	Quail Ridge Rd.

ON	AT
Sparks St.	Country Club Dr.
Sparks St.	Humble Ave.
Sparks St.	Princeton Ave.
Spartan Dr.	Fannin Ave.
Spartan Dr.	Neely Ave.
Spence Dr.	Canadian Ave.
Spence Dr.	Hilltop Dr.
Spence Dr.	Rio Grande Ave.
Spraberry Dr.	Anetta Dr.
Spraberry Dr.	Canyon/Devonian Dr.
Spraberry Dr.	Pleasant Dr.
Spraberry Dr.	Raymond Rd.
Spahn St.	Mile High Ln.
Spring Meadow Ln.	Meadowpark Dr.
Spring Meadow Ln.	Pine Meadow Dr.
Spring Park Dr.	Edwards St.
Springfield Ct.	Greenbriar Dr.
Springmont Dr.	Whittle Way
Springwood Ct.	Pine Meadow Dr.
Spruce Ave.	Loma Dr.
Spruce Ave.	Main St.
Spruce Ave.	Neely Ave.
Spruce Ave.	Pecos St.
Spruce Ave.	Tyler St.
Spur Dr.	I-20 N. Frontage Rd.
Spur Dr.	Lone Star Ln.
Spur Dr.	Red River Ln.
Spyglass Cr.	Purple Sage Tr.
St. Andrews Dr.	Dentcrest Dr.
St. Andrews Dr. / Ct.	Godfrey St.
St. Andrews Dr.	Mark Ln.
St. Andrews Dr.	Norwood St.
Stacie Ave.	Holdridge Rd.
Stage Coach Ct.	Blue Sky St.
Stanolind Ave.	"D" St.
Stanolind Ave.	Godfrey St.
Stanolind Ave.	"H" St.
Stanolind Ave.	Huntington St.
Stanolind Ave.	"I" St.
Stanolind Ave.	"L" St.
Stanolind Ave.	Lanham St.
Stanolind Ave.	Mark Ln.
Stanolind Ave.	McDonald Dr.
Stanolind Ave.	Mogford St.
Stanolind Ave.	"N" St.
Stanolind Ave. (both "dead end" locations between "D" St. and "A" St.)	Stanolind Ave.
Stanolind Ave.	Tarleton St.
Stanolind Ave.	Wedgewood St.

ON	AT
Stanolind Ave.	Western Dr.
Stanolind Ave.	Whitney Dr.
Stanolind Ave.	Winfield Rd.
Starboard Dr.	Tradewinds Blvd.
Stellar Pl.	Godfrey St.
Stellar Pl.	Trinity Dr.
Sterling Pl.	Crowley Blvd.
Sterling Ct.	Heritage Blvd.
Stetson Dr.	Honeysuckle Ln.
Stewart Ave.	Shandon Ave.
Stewart Ave.	Tarleton St.
Stillmeadow Dr.	Fargo Ave.
Stillmeadow Dr.	Westminster Dr.
Stokes Ave.	Baird St. (westbound)
Stokes Ave.	Terrell St. (eastbound)
Stonebridge Dr.	Cerrillos Ave.
Stonebridge Dr.	Mockingbird Ln.
Stonebridge Dr.	Pavilion Pkwy.
Stonebridge Dr.	Solomon Ln.
Stonecrest	Hereford Blvd.
Stonecrest	Windrift
Stonefield Dr.	Stonebridge Dr.
Stonefield Dr.	Torrey Vista Dr.
Stoneleigh Rd.	Lancashire Rd.
Stonewall St.	Indiana Ave.
Stonewall St.	New York Ave.
Stoneybrook Dr.	Ric Dr.
Stoneybrook Dr.	Shadylane Dr.
Storey Ave.	Alpine St.
Storey Ave.	"B" St.
Storey Ave.	Bentwood Dr.
Storey Ave.	Bonham St.
Storey Ave.	"C" St.
Storey Ave.	"D" St.
Storey Ave.	Edgewood Dr.
Storey Ave.	"F" St.
Storey Ave.	"G" St.
Storey Ave.	Godfrey St.
Storey Ave.	"K" St.
Storey Ave.	Lanham St.
Storey Ave.	Maberry St.
Storey Ave.	Marienfeld St.
Storey Ave.	McDonald St.
Storey Ave.	Powell St.
Storey Ave.	Stoneybrook Dr.
Storey Ave.	Ward St.
Stratford Ct.	Kingston Dr.
Stratton Dr.	Lehigh Dr.
Stratton Dr.	St. Andrews Dr.
Stutz Dr.	Maxwell Dr.

ON	AT
Stutz Dr. / Ct.	Ward St.
Stutz Dr.	Whitney Dr.
Stutz Pl.	Lanham St.
Summit Ave.	Baird St. (westbound)
Summit Ave.	Belmont St.
Summit Ave.	Terrell St. (eastbound)
Sunburst Dr.	Preston Dr.
Sunburst Dr.	Sunshine Pkwy.
Suncrest Ave.	Dengar Ave.
Suncrest Ave.	McDonald St.
Sundance Pl.	Crowley Blvd.
Sundance Ct.	Heritage Blvd.
Sundown Cr.	Purple Sage Tr.
Sunmore Cr. (both intersections)	Sunburst Dr.
Sunny Stone Dr.	Daybreak Way
Sunnyside Dr.	Stonybrook Dr.
Sunnyside Dr.	Storey Ave.
Sunrise Way	Overshine Ln.
Sunset Blvd.	Michigan Ave.
Sunset Blvd.	Ohio Ave.
Sunshine Pkwy.	Idlewilde Dr.
Sunshine Pkwy.	Wydewood Dr.
Sun Tea Way	Daybreak Way
Sun Tea Way	Harvest Rain St.
Sweetbriar Dr.	Ric Dr.
Sweetbriar Dr.	Storey Ave.
Sycamore Ave.	Crestview Rd.
Sycamore Ave.	Holly Dr.
Tamarind Dr.	Melville Dr.
Tammy Cv.	Fredna Pl.
Tampico Dr.	Denton St.
Tampico Dr.	Monterrey Dr.
Tanforan Ave.	Oriole Dr.
Tanforan Ave.	Widener Strip
Tanglewood Dr.	Leisure Dr.
Tanner Dr.	Devonian Dr.
Tanner Dr.	Leddy Dr.
Tanner Dr.	McDonald St.
Tanner Dr.	Mercedes Dr.
Tanner Dr.	Raymond Rd.
Taos Rd.	Overshine Dr.
Tarleton St.	Cuthbert Ave.
Tarleton St.	Neely Ave.
Tarleton St.	Shandon Ave.
Tarleton St.	Storey Ave.
Taylor Ave.	Camp St.
Taylor Ave.	Jefferson St.
Taylor Ave.	Main St.
Taylor Ave.	Marshall St.
Taylor Ave.	Mineola St.

ON	AT
Taylor Ave.	Terrell St.
Teakwood Tr.	Oriole Dr.
Tejas	Shawnee
Telluride Dr./Ct.	Durango Dr.
Tennessee Ave.	Baird St.
Tennessee Ave.	"C" St.
Tennessee Ave.	Carrizo St.
Tennessee Ave.	Colorado St.
Tennessee Ave.	"D" St.
Tennessee Ave.	Dallas St.
Tennessee Ave.	E. Broadway St.
Tennessee Ave.	"F" St.
Tennessee Ave.	Fort Worth St.
Tennessee Ave.	"G" St.
Tennessee Ave.	Loraine St.
Tennessee Ave.	"L" St.
Tennessee Ave.	"M" St.
Tennessee Ave.	Main St.
Tennessee Ave.	Marienfeld St.
Tennessee Ave.	"N" St.
Tennessee Ave.	Terrell St.
Tennessee Ave.	W. Broadway
Tennessee Ave.	Weatherford St.
Terra Ct.	Brighton Pl.
Terrace Ave.	Lanham St.
Terrace Ave.	Maberry St.
Terrace Ave.	Mogford St.
Terrace Ave.	Neely Ave.
Terrace Ave.	Ward St.
Terrell St.	Cuthbert Ave.
Terrell St.	Gist Ave.
Terrell St.	Golf Course Rd.
Terrell St.	Hicks Ave.
Terrell St.	Illinois Ave.
Terrell St.	Louisiana Ave.
Terrell St.	Parker Ave.
Terrell St.	Taylor Ave.
Texas Ave.	Calhoun St.
Texas Ave.	Carver St.
Texas Ave.	Donald St.
Texas Ave.	Jackson St.
Texas Ave.	Lee St.
Texas Ave.	Tilden St.
Thames Ct.	Lancashire Rd.
Thomas Ave.	Crestview Rd.
Thomas St.	Ohio Ave.
Thomas Ave.	Raymond Rd.
Thomas Paine Rd.	Bunker Hill Rd.
Thomas Paine Rd.	Musket Dr.
Thomason Dr.	Beal Pkwy. / Illinios Ave.

ON	AT
Thomason Dr.	Tradewinds Blvd.
Thornridge Dr.	Leisure Dr.
Thornridge Dr.	Shadylane Dr.
Three Rivers Ln.	Riverfront Dr.
Three Rivers Ln.	Spahn St.
Tilden St.	Golf Course Rd.
Tilden St.	Illinois Ave.
Tilden St.	Indiana Ave.
Tilden St.	Orchard Ln.
Tilden St.	Wall St.
Timber Ln. / Ct.	Oakridge Dr.
Timberglen Pl./Cir.	Valwood Dr.
Timberwolf	Elkins
Torrey Vista Dr.	Solomon Ln.
Tower Rd. (both intersections)	Jordy Rd.
Tradewinds Blvd.	Deauville Blvd.
Travis Ave.	Crestview Rd.
Travis Ave.	Holly Dr.
Travis Ave.	Powell St.
Travis Ave. (both intersections)	Walker St.
Travis Ave.	Waverly Dr.
Travis Ave.	Williams St.
Tremont Ave.	Dentcrest Dr.
Tremont Ave.	Edgemont Dr.
Tremont Ave.	Mark Ln.
Tremont Ave.	Sagemont Dr.
Tremont Ave.	Whittle Way
Trennon Pl.	Crowley Blvd.
Trenton Dr.	Trobaugh Blvd.
Trenwood Dr.	Desert Rose Dr.
Trenwood Dr.	Solomon Ln.
Trevino St.	Crenshaw Dr.
Trevino St.	Graham Dr.
Trevino St.	Nicklaus St.
Trinity Ct.	Greenbriar Dr.
Trinity Dr.	Godfrey St.
Trinity Dr.	Milbrook Pl.
Trinity Dr.	Wedgewood St.
Trinity Meadows Dr.	Fieldcrest Ln. / Meadowridge Ln.
Trinity Meadows Dr.	Skyline Dr.
Trinity Meadows Pl.	Northfield Dr.
Trinity Meadows Pl.	Skyline Dr.
Truman St.	Delano Ave.
Truman St.	Franklin Ave.
Truman St.	Kessler Ave.
Truman St.	Mariana Ave.
Turtle Creek Rd.	Pedernales Dr.
Twin Springs	Barking Rock
Tyler St.	California Ave. (east and west intersections)

ON	AT
Tyler St.	Chestnut Ave.
Tyler St.	Cottonwood Ave.
Tyler St.	Cowden Ave.
Tyler St.	Cuthbert Ave.
Tyler St.	Dormard Ave.
Tyler St.	Estes Ave.
Tyler St.	Garden Ln.
Tyler St.	Golf Course Rd.
Tyler St.	Hamby Ave.
Tyler St.	Illinois Ave.
Tyler St.	Indiana Ave.
Tyler St.	Industrial Ave.
Tyler St.	Jax Ave.
Tyler St.	Jefferson St.
Tyler St.	Magnolia Ave.
Tyler St.	Missouri Ave.
Tyler St.	New York Ave.
Tyler St.	Nobles Ave.
Tyler St.	Oak Ave.
Tyler St.	Orchard Ln.
Tyler St.	Parker Ave.
Tyler St.	Pine Ave.
Tyler St.	South Ln.
Tyler St.	Texas Ave.
Tyler St.	Wall St.
Tyler St.	Walnut Ln.
Tyler St.	Washington Ave.
U.S. 80 Service Rd.	County Rd. 1162
U.S. 80 Service Rd.	Elkins Rd.
U.S. 80 Service Rd.	Todd Rd.
Unbridled Tr.	Sir Barton Pkwy.
Upland St.	Baumann Ave.
Upland St.	Bedford Ave.
Upland St.	Cuthbert Ave.
Upland St.	Kansas Ave.
Upland St.	Louisiana Ave.
Upland St.	Michigan Ave.
Upland St.	Ohio Ave.
Upland St.	Princeton Ave.
Upland St.	Storey Ave.
Valley Dr.	Haynes Ave.
Valley Dr.	Skyline Dr.
Valley View St.	Daybreak Way
Valor Ct.	Valor Ln.
Valor Ln.	Arlington Rd.
Valor Ln.	Pentagon Rd.
Val Verde Dr.	Sandstone Dr.
Valwood Dr.	Tanforan Ave.
Vanguard Rd.	Arlington Rd.
Vanguard Rd.	Bunker Hill Rd.

ON	AT
Vanguard Rd.	Founders Rd.
Vanguard Rd.	Victory Pkwy.
Ventnor Ave.	Boardwalk
Ventnor Ave.	Carver St.
Ventura Ave.	"I" St.
Ventura Ave.	"L" St.
Verde Glen Ct.	Bent Tree Tr. (both intersections)
Vermont Ave.	Pacific Ave.
Versailles Dr.	Burchill Dr.
Versailles Dr.	Devonian Dr.
Versailles Dr.	Eisenhower Dr.
Versailles Dr.	Meadow Dr.
Victory Pkwy.	Arlington Rd.
Victory Pkwy.	Crown Point Ct.
Vine Pl.	Franklin Ave.
Virginia Ave.	Pacific Ave.
Vista Ridge Rd.	Meadowside St.
Vista Ridge Rd.	Sunnyvale St.
Vista West Pkwy.	Bluebird Ln.
Vista West Pkwy.	Caldera Blvd.
Vista West Pkwy.	Purple Sage Trl.
Viva Max Dr.	McPherson Ln.
Viva Max Dr.	Thomas Paine Rd.
W. Broadway St.	Cuthbert Ave.
W. Broadway St.	Harvard Ave.
W. Broadway St.	Louisiana Ave.
W. Broadway St.	Michigan Ave.
W. Broadway St.	Storey Ave.
W. Circle Dr.	Delano Ave.
W. Circle Dr.	Franklin Ave.
W. Circle Dr.	Roosevelt Ave.
W. Industrial Loop	Industrial Ave.
Wagner Dr./St.	Legends Blvd.
Wagner Dr.	Three Rivers Ln.
Wagon Ct.	Husk St.
Walcott Ave.	Loraine St.
Walcott Ave.	Main St.
Walcott Ave.	Whitaker St.
Wall St.	Carver St.
Wall St.	Lee St.
Wall St.	Loraine St.
Wall St.	Tilden St.
Walnut Ln.	Carver St.
Walnut Ln.	Fairgrounds Rd.
Walnut Ln.	Lincoln St.
Walnut Ln.	Terrell St.
Walton Ave.	Pecos St.
Ward St.	Auburn Dr.
Ward St.	Cuthbert Ave.
Ward St.	Fannin Ave.

ON	AT
Ward St.	Haynes Ave.
Ward St.	Haynes Dr.
Ward St.	Louisiana Ave.
Ward St.	Michigan Ave.
Ward St.	Neely Ave.
Ward St.	Ohio Ave.
Ward St.	Princeton Ave.
Ward St.	Sentinel Dr.
Warehouse Rd.	Industrial Ave.
Washington Ave.	"B" St.
Washington Ave.	Benton St.
Washington Ave.	"C" St.
Washington Ave.	Carver St.
Washington Ave.	Clay St.
Washington Ave.	"D" St.
Washington Ave.	"F" St.
Washington Ave.	"G" St.
Washington Ave.	"L" St.
Washington Ave.	Lee St.
Washington Ave.	Madison St.
Washington Ave.	Main St.
Washington Ave.	Mann St.
Washington Ave.	McGarvey St.
Washington Ave.	"N" St.
Washington Ave.	Pecos St.
Washington Ave.	Stonewall St.
Washington Ave.	Tilden St.
Washington Ave.	Webster St.
Washita	Choctaw
Washita	Fairgrounds Rd.
Washita	Kanawha
Washita	Shawnee
Watson Ct.	Crenshaw Dr.
Watson St.	Cuthbert Ave.
Watson St.	Pecos St.
Waukomis Pl.	Navajo
Waurika Pl.	Navajo
Waverly Dr.	Anetta Dr.
Waverly Dr.	Raymond Rd.
Wayside Dr.	Taylor Ave.
Weatherford St.	Cuthbert Ave.
Weatherford St.	Golf Course Rd.
Weatherford St.	Hamby Ave.
Weatherford St.	Hicks Ave.
Weatherford St.	Indiana Ave.
Weatherford St.	Jax Ave.
Weatherford St.	Kansas Ave.
Weatherford St.	Kentucky Ave.
Weatherford St.	Louisiana Ave.
Weatherford St.	Michigan Ave.

ON	AT
Weatherford St.	Mississippi Ave.
Weatherford St.	New Jersey Ave.
Weatherford St.	New York Ave.
Weatherford St.	Parker Ave.
Weatherford St.	Pennsylvania Ave.
Weatherford St.	Taylor Ave.
Weatherford St.	Washington Ave.
Webster St.	Indiana Ave.
Webster St.	New York Ave.
Webster St.	Pennsylvania Ave.
Wedgewood Ct.	Godfrey St.
Wedgewood St.	Godfrey St.
Wedgewood St.	Gulf Ave.
Wedgewood St.	Humble Ave.
Wedgewood St.	Hyde Park Ave.
Wedgewood St.	Neely Ave.
Wedgewood St.	Shell Ave.
West Wind Ct.	Bent Tree Tr.
Westcliff Dr.	Douglas Ave.
Westcliff Dr.	Princeton Ave.
Western Dr.	Golf Course Rd.
Western Dr.	Neely Ave.
Western Dr.	Stanolind Ave.
Westin Dr.	Pavilion Pkwy.
Westminister Dr.	Fargo Ave.
Westminster Dr.	Norwood St.
Westmont Ct.	Whittle Way
Westview Dr.	Bluebird Ln. (northbound)
Westview Dr.	Southridge Ct.
Westwind Dr.	Nassau Dr.
Westwind Dr.	Shell Ave.
Wewoka Pl.	Navajo
Whitaker St.	Cuthbert Ave.
Whitaker St.	Kansas Ave.
White Horse Cv.	Berkeley Trail
Whitman Dr.	Bluebird Ln.
Whitney Dr.	Haynes Dr.
Whitney Dr.	Maxwell Dr.
Whitney Dr.	Moss Ave.
Whitney Dr.	Neely Ave.
Whitney Dr.	Sentinel Dr.
Whittle Way	Preston Dr.
Whittle Way	Sunshine Pkwy.
Whittle Way	Tremont Ave.
Wichita Ct.	Pedernales Dr.
Willeys Ave.	Calhoun St.
Willeys Ave.	Jackson St.
Willeys Ave.	Jesse St.
Willeys Ave.	Tilden St.
Willingham Dr.	Manor St.

ON	AT
Willingham Dr.	McDonald St.
Willowood Dr.	Leisure Dr.
Wilshire Dr.	Eisenhower Dr.
Wilshire Dr.	Graceland Dr.
Wilshire Dr.	Parkdale Dr.
Wimberley Spring Ct.	Spence Dr.
Windecker St.	La Force Blvd.
Windecker St.	Sloan Field Blvd.
Windecker St.	Wright Dr.
Windhaven Dr.	Deauville Blvd.
Windhaven Dr.	Tradewinds Blvd.
Windridge Cir.	Mockingbird Ln. (both intesections)
Windrift	Crowley Blvd.
Winfield Rd.	"H" St.
Winfield Rd.	Humble Ave.
Winfield Rd.	"I" St.
Winfield Rd.	"L" St.
Winfield Rd.	Seaboard Ave.
Wolcott Ave.	Baird St.
Wolcott Ave.	Terrell St. (eastbound)
Wolcott Ave.	Main St.
Wood Dr.	Oriole Dr.
Wood Dr.	Valwood Dr.
Woodbar Ct.	Northcrest Dr.
Woodcrest Dr.	Cuthbert Ave.
Woodcrest Dr.	Princeton Ave.
Woodcrest Dr.	Ric Dr.
Woodcrest Dr.	Sinclair Ave.
Woodcrest Dr.	Storey Ave.
Woodhaven Ct.	Skyline Dr.
Woodhaven Dr.	Skyline Dr.
Woodhollow Dr.	Briarpath Dr.
Woodhollow Dr.	Hilltop Dr. / Lemonwood Dr.
Woodhollow Dr.	Mathis St.
Woodhollow Dr.	Northcrest Dr.
Woodhollow Dr.	Oriole Dr.
Woodland Park Ave.	"A" St.
Woodland Park Ave.	Breckenridge Dr.
Woodland Park Ave.	Gunnison Dr.
Woodlawn Dr.	Gulf Ave.
Woodlawn Dr.	Stanolind Ave.
Woodrose	Barking Rock
Wrangler Ln.	Lone Star Ln.
Wright Dr.	Sloan Field Blvd.
Wyatt Way	Stake Ave.
Wydewood Dr.	Dengar Dr.
Wydewood Dr.	Dentcrest Ave.
Wydewood Dr.	Everglade Ave.
Wydewood Dr.	Neely Ave.
Wydewood Dr.	Sinclair Ave.

ON	AT
Wylea Cv.	Lindora Way
Yellow Rose Ct.	Buffalo Gap
Yorkshire Dr.	Sherwood Dr.
Yorkshire Dr.	Widener Strp.

SECTION TWO. That the Traffic Engineer is hereby authorized and directed to erect and install appropriate signs and markings at the designated locations in conformance with the State Highway Department's Manual and Specifications, indicating and carrying out the provisions of this ordinance.

SECTION THREE. The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

SECTION FOUR. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION FIVE. The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding two hundred dollars ($200.00).

SECTION SIX. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by the law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the _____ day of _____, A.D., 2022; and passed to second reading on motion of Council member _____, seconded by Council member _____, by the following vote:

Council members voting "AYE":

Council members voting "NAY":

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member _____, seconded by Council member _____, on the _____ day of _____, A.D., 2022, at a regular meeting of the City Council:

Council members voting "AYE":

Council members voting "NAY":

PASSED AND APPROVED THIS _____ day of _____, A.D., 2022.

_____
Patrick N. Payton, Mayor

ATTEST:

_____
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT
AND COMPLETENESS:

_____
Jose Ortiz, Engineering Services Director

APPROVED ONLY AS TO FORM:

_____

John Ohnemiller, City Attorney